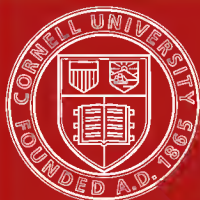


THE CONSERVATION
OF THE CHILD

BY

ARTHUR HOLMES



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LIPPINCOTT'S

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THE CONSERVATION OF THE CHILD

A MANUAL OF CLINICAL PSYCHOLOGY
PRESENTING THE EXAMINATION AND
TREATMENT OF BACKWARD CHILDREN

BY

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PHILADELPHIA AND LONDON
J. B. LIPPINCOTT COMPANY
1912

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Published September, 1912

*Printed by J. B. Lippincott Company
The Washington Square Press, Philadelphia, U. S. A.*

TO
MY MOTHER
THIS BOOK IS AFFECTIONATELY DEDICATED

PREFACE

The rapid growth of the new clinical psychology and the inauguration of Psychological Clinics in connection with various institutions have made the need of a book on this subject peculiarly felt by students and workers. The Psychological Clinic at the University of Pennsylvania was the pioneer in this country. Its sixteen years' existence, its accumulation of records and the present high state of organization to which it has been brought, make an account of its history and functions especially valuable.

This monograph aims to give a practical description of the inauguration and operation of a psychological clinic. Being practical, it does not attempt to go deeply into the abstract principles underlying clinic methods. While giving several systems of mental tests it does not, for example, offer any extended discussion of their psychological bases, nor does it enter into an exhaustive criticism of the definition and classification of mental defectives, but contents itself with pointing out how the more common criteria have been applied in practice.

Nevertheless the work is a unit in itself. It covers the field of clinic operations. It offers a practical guide to the psycho-clinician, and at the same time extends its discussions of retarded children far enough to make it valuable and interesting to the teacher, to the medical

man, or any one else interested in child-welfare. It includes, therefore, tests and measurements gathered from different sources and compacted into a form readily applicable to the diagnosis of special children.

To my own clinic experience, covering a number of years, the aid and advice of many workers in cognate fields have been added. To Dr. Clara Harrison Town, Director of the Laboratory of Clinical Psychology, Lincoln State School and Colony at Lincoln, Illinois, I am especially indebted for the elaboration of the psychological analysis in Chapter VII; and to Dr. Frieda Lippert, Psychological Clinic Assistant at the University of Pennsylvania, for help with the physical examination blank.

Primarily for inspiration to this work and constant guidance in it, my greatest debt is due to Dr. Lightner Witmer, with whom I have been associated, and who most generously placed at my disposal the invaluable results of his sixteen years' experience. In making this acknowledgment, I express but a very small fraction of my debt to him. What science and society at large owe to him as the inaugurator of this beneficent application of psychology to the mental ills of children, only the coming years will reveal.

ARTHUR HOLMES.

UNIVERSITY OF PENNSYLVANIA, January, 1912.

EDITOR'S PREFACE

The people of this nation have been prodigal of all their resources. It was evident long ago to the thoughtful mind that the time was speedily approaching when we should both repent our extravagance and endeavor to institute such change in our procedure as to conserve what we formerly wasted. Whence arose in the past decade the nation-wide movement for the conservation of our natural resources. Economic stress led to this reform. It is well, even if it is confessedly late. In our greed to make easily a large sum of wealth we have wasted beyond recovery a much larger sum. Wisdom is becoming our heritage, but it has come with a limping gait.

The same general truth applies to the conservation of our greatest and noblest asset—our children. We have given the child whose native endowments made easy its education a fairly creditable training. Those that did not readily lend themselves to the system of education as it was were cast aside as waste products of our civilization. We are now reaping the crop in shame. Our land is filled with all sorts of institutions, maintained at enormous cost, in which is crowded our army of misfits. We cannot by legislative and philanthropic endeavor meet the rapidly growing demand. We have neglected the ounce of prevention and are feebly providing the pound of cure.

To charge this situation to the public school is most unfair. The conditions governing these could not result

in any other issue. These conditions the school was forced to accept. It did not create them, nor did it feel content under them. The people have applauded this great institution of democracy, and neglected to make it the agency their platitudes would have it to be.

With a fiscal provision that is unworthy a great people; with partly trained, inexperienced but thoroughly well-meaning teachers; with overcrowded classes; with inadequate and at times incompetent supervision; with ignoble interference by school directors whose business is legislative, but who made it their business to be executives as well; with equipment confessedly poor; with buildings that were a menace, not an aid, to right education; with the absence of uniformity even in ideals, due to inadequate supervision; and with substantially no provision for enforced attendance, for the prevention of the exploitation of child-labor, and for professional medical care of the child, the marvel is that the school has done so well. The saving influence in it all has been, and is, the unselfish and beneficent force of teachers who have faced a critical situation with great fortitude, tact and devotion. They have sensed the conditions. They have appealed for remedies. They have gone vastly beyond their legal duties in a heroic effort to reach the last child and aid him to his best estate in the Republic.

The conservation of the child, by all odds the most vital conservation with which we can have to do, has thus been allowed to await the action of some modern Pestalozzi;—some great-hearted and sanely-visioned teacher who would turn to the waste products of our schools and in the spirit of science and humanity ascertain their true state and formulate such guidance as to give to these their maximum value to society. We are now doing this.

The *Psychological Clinic* at the University of Pennsylvania was a pioneer in this cause. Here the latest and best scientific research has been applied to the child whose mentality precluded its ability to proceed normally with its education. Much has already been done of educational moment. It is important now to generalize this work, and particularly to give teachers everywhere an insight into these cases, that they may be promptly and properly cared for. Theoretically there should be no waste product in our schools. As tools of democracy the schools should universalize their activities. Practically, for causes patent to all, there will always be subnormal children. They cannot be educated with normal children. Both groups suffer by the contact. To detect the subnormal children and subject them to scientific diagnosis is the first step in their proper education. This much we may now confidently claim is possible.

To classify the subnormals into such groups as are essential to their right treatment is a vastly more complex and difficult matter. We lack as yet absolute criteria for such classification. Science must give us these standards, and science will. It is my opinion, after years of observation, that too many so-called scientific diagnoses are crudity itself,—that many a child is classed as subnormal whose only limitation is an unfortunate environment. The temptation to find sensational data as to the number of “misfits” in the school is too strong for some to resist. The apparent willingness of an impatient or overwrought teacher may also work injustice to some. But with due allowance for all this, there remains a large group for whom special classes or some other remedial agency must be secured. The really subnormal child appeals in compelling ways to one's sympathy. More-

over, the true ends of our social democracy are vitally concerned in securing to those the most careful and complete training.

Many children need a care and culture vastly more specific in character than they now receive. The failure to make suitable provision for these results in great loss to them and to society. They are indisputably entitled to the best they can receive, and society is the loser as well when any unit of it acts below his best. Moreover, the school is by unreflecting critics made to appear a failure when it is notoriously true that the school alone so nurses these cases along as to gloss over what would be a social disaster were the school rigidly to define its scope and technically fulfill the letter of its law.

Back of Dr. Holmes's discriminating study lies a great educational and social need. If we are wise we shall heed it and turn seriously to the business of caring for the most hopeless unit in the social order. We shall do this all the better by giving heed to the facts here presented and by following the scientific method here so graphically portrayed.

M. G. B.

August 22, 1912.

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THE CONSERVATION OF THE CHILD

I.

HISTORICAL SKETCH

The Treatment of Idiots among the Ancients.—The lot of the idiot has varied with the tides of history. Among the ancients feeble-minded children were objects of derision, reproach and persecution, were without rights or privileges, accursed by the gods. Some nations, like the Spartans, got rid of them by exposure or violence. Traces of this practice are found in the laws of Lycurgus, and intimations of it exist in Cicero's writings. Until recently the same custom prevailed among some South Sea Islanders and some North American Indians, though not universally with the latter, as the well-known instance in Cooper's "Deerslayer" would indicate. Even in the ancient times all idiots did not share the same fate, for we read of Patua, the blind imbecile slave of Seneca's wife; and of Nero, Commodus, Elagabalus, three wearers of the imperial purple.

Early Christian Care of Idiots.—The relentless cruelty of the ancients changed to kindness among the early Christians for whom Christ's ministry to the demon-possessed became a divine example. Notable leaders of the early Church like the Bishop of Myra (the St. Nicholas of to-day), in the reign of the Emperor Constantine in

the west about 300 A.D., devoted themselves to the care of these unfortunates, and Euphrasia, closely related to the royal household of Theodosius, retired at the age of twelve to the convent of Thebiad for the same purpose. Examples of the same consideration for the mentally afflicted are found in other religions. Confucius and Zoroaster commended imbeciles as objects of mercy, and the Koran enjoins all true believers to have charity for the feeble-minded.

The Mediæval Attitude.—The early Christian zeal, sincere but unskilled, changed to the lighter and more frivolous attitude of the mediæval period. Imbeciles now became the fools and jesters of the royal courts. They had the freedom of palaces; they wandered unmolested over Europe, and were regarded by the French especially as “*enfants du bon Dieu*.” They were viewed by most people with superstitious reverence, as those who walked on earth but had their conversation in heaven. For this reason Tycho Brahe, the great Scandinavian astronomer, retained always in his observatory a fool companion to whose babblings he listened as to revelations from heaven. Probably a remnant of that superstition still remains in the word “*cretin*,” from the French “*Chretien*” or Christian, which is yet applied to a certain class of defectives.

The Renaissance Reaction.—Such friendliness, however, based only upon fancy and superstition, could not be other than fitful and uncertain. In the Renaissance the pendulum swung back again toward the ancient cruelty. Luther and Calvin both denounced imbeciles as “filled with Satan.” As a cure for their condition, beatings, scourgings, and other forms of inhuman treatment were resorted to in order to drive out the possessing

demon. Even to-day among the ignorant and superstitious in America such beliefs are still current, and instances of savage cruelty practised upon the weak-minded are not unknown.

Modern Physiological Education the Source of Training of Idiots.—Fortunately, however, the foundations of the modern understanding of imbecility were being laid in the emphasis upon physiological education. From many workers, responsible for the beginnings of the modern movement, there emerges distinctly one leader in Jacob Rodrigues Pereire. Seizing upon the physiological studies of other original investigators, his active sympathy and powers as a linguist and philosopher led him to apply the physiological method to the education of deaf mutes.

Whether the streams of pedagogical treatment of the feeble-minded can be traced back to Pereire or not, certainly they can be easily followed to the marvellous suggestor of so many modern methods, Jean Rousseau Jacques Rousseau (1712–1778), and his original and impractical “Emile.” Through that book, Pestalozzi was directly inspired in 1767 to purchase a hundred acres of ground in the country, to build his cottage, and there to undertake the rearing of his own son like the ideal “Emile.” Of his seven years’ experience in this attempt he kept a note book called “The Father’s Journal,” perhaps the first piece of child psychology on record. When his experiment with his own son failed, he enlarged the enterprise in 1775 by turning his farm into a manual training school where the children of poor neighbors might come to study and pay their tuition by the products of their toil. While his doctrine was “reform by environment,” it practically amounted to education by physical training. This enterprise gained for him the professor.

ship in the orphan asylum in Stanz in 1787, and later led him to found his institute at Yverdun in 1805 from which have emanated all modern methods and theories of education. It was at the latter institute that Froebel spent his time from 1782 to 1852 and received the impetus to that great work for children originated and carried on in the kindergarten.

Directly traceable to the wonderfully suggestive Rousseau comes another line of pedagogical development closely allied to physiological training, and developing into the modern movement of physical education. In 1774, Basedow, directly influenced by the "Emile," founded his Philanthroporium at Dessau, which in turn inspired Salzmann to begin a similar work near Gotha in 1784, where Gutsmuths labored from 1785 to his death. Father Jahn (1778-1852) first met Freizen at Planann's Pestalozzian Institute at Berlin, and together in 1811 they started a Turn Verein which later became the national system of gymnastics for Germany. In Nachtigall's Institute in Copenhagen and through Nachtigall to Gutsmuths in Germany, the Swede, Peter Henry Ling (1776-1839), found the mainsprings of his career and thus connected the German-Swedish gymnastical movement with Rousseau. All this physical culture tended directly toward a better understanding of the relation between mind and body and the effect of physical training upon intellectual development.

The First Training of an Idiot.—The stream of historical interest which primarily concerns us, however, is that which undertook the training of the deficient child. Whatever the causes of this development were, undoubtedly the most striking single occasion for the first experiment in modern training was the "wild boy" or "Sauvage

Other Lines of
Development

d'Aveyron." This boy, about eleven years old, was discovered in the forest of Caune, Department of Aveyron, where he was wandering about gathering acorns and other nuts for food. He was caught and brought to Paris, where his education was begun by Dr. Itard, The Wild Boy of Aveyron Physician to the School for Deaf Mutes. He took up the work of training this child of nature in order to answer the philosophical questions: Are ideas innate as taught by the rationalistic school? Or are they abstracts from experience as taught by the empirical school? Believing that he had before him a mind "undebauched by learning," he set about to show by his method of education whether the ideas with which the boy should become equipped could be drawn out of his "soul depths" or were to be imprinted on the *tabula rasa* of his mind. Gradually, however, the teacher conformed his methods more to the needs of an idiot mind than to those of a normal mind. The results of his work were entirely discouraging to himself, but he received from the French Academy, who saw better than he the larger success of his teaching, words of praise and commendation. Another French physician, Edward Seguin, less philosophical and more practical than Itard, saw clearly the significance of the immense difference between the mental states of the wild boy at the beginning of his training and at the end. In 1837 this man founded a school in Paris for the education of idiots, the first conscious attempt in this direction and the first school founded for the purpose in all the world. So greatly did Seguin enlarge and improve his system of education that in 1842 he was made Director of the Institute at the Bicêtre. In this capacity, on account of disagreement with the management, he remained but a year, and then retired to his private school, where he divided his time between

teaching and writing on his favorite subjects. Later, on account of political causes, he came to America, where he continued his interest in the education of idiots and was instrumental in establishing some of our largest and most flourishing institutions for the feeble-minded.

Guggenbühl's Work with Cretins.—The work in Paris, in Germany, and in Switzerland all reached their efflorescence about the year 1842. The story of Guggenbühl and his Alpine Cretin Colony forms one of the most fascinating and romantic in this particular field. Inspired with a lofty purpose to help these unfortunates by seeing a poor cretin praying by a roadside shrine, he settled in 1836 in the Valley of Olienthal, Switzerland, for two years to study more closely their condition. After that he accepted a position in an asylum near Berne in order that he might come in sympathetic contact with cretins and receive as much scientific preparation as possible for his life work. His enthusiastic temperament moved him to send a stirring appeal to the Swiss Association for the Advancement of Science in a little pamphlet called "Christianity and Humanity in Regard to Cretinism in Switzerland."

Out of the interest aroused in this particular class of defectives came the plan of forming a colony for their training and treatment. In 1842 a plantation on the Abendberg near Interlaken, Canton Berne, was secured, 4000 feet above the sea, over a point where cretinism flourished in the valley below, and cottages were erected upon the southern slope, with a hospital building in charge of the Evangelical Sisters of Mercy or Diakonissen. To this sanatorium were brought little men and women, dwarfs in body and mind, to see what fresh air, clear sunlight, and scenery of unsurpassed grandeur would do toward stimulating their dormant faculties,

Their diet was most simple, consisting mainly of vegetables, omitting potatoes, with fruits, milk, eggs, white bread, and but little meat.

Their mental treatment was unique, based as it was upon physiological stimulation by oft-repeated, exaggerated, frequently changing stimuli. For example, the children were taken out upon the mountain side to view the glorious sunsets and sunrises, the magnificent panorama, the stress and fury of the storms, the thundering of cataracts, and the flashes of intramontaine lightnings.

Whether or not it was due to removing the children from the valley with its depressing effect of overshadowing mountains, to the change of drinking water, or to the healthy out-door life and more hygienic diet, certain it is that many of them improved marvellously in a short time. The news spread all over the world. Visitors came from Germany, England, and even America to view the modern miracle of restoring idiots to their right minds. The tide of enthusiasm reached high-water mark in 1850 and began to ebb almost immediately thereafter. Allegations of abuse followed, and finally an investigation was made by the British Minister at Berne which resulted in Guggenbühl's impeachment as a charlatan and the consequent withdrawal of support by the Swiss Society for the Advancement of Science. In vain did Guggenbühl reply by tongue and pen. His arguments and entreaties were alike of no avail. His institution was disbanded and he retired to Montreaux, where in 1865 at the age of forty-seven he died of a broken heart. Thus closed one of the most romantic tragedies of educational reform and at the same time one of the most fertile and far-reaching in its effects upon the treatment and train-

The Collapse
of Guggen-
bühl

ing of imbeciles. The permanent results of the work were to be seen in the great impetus to the study of the cretin, to the organization of sanatoriums on the cottage-colony plan, and later the establishment of schools for training all types of feeble-minded children.

The Work in Germany.—The beginnings in Germany were directly inspired by the example of Seguin at Paris. For Saegert, in Berlin, while Director of the Asylum of Deaf Mutes, formed a private class for imbeciles in 1845. This work became the inspiration of Germany, and from 1846 to 1881 there were founded thirty-two training schools for idiots. Dr Kern at Leipsic opened a private asylum in that city which was afterward removed to Mockern, and at the time of his death it sheltered fifty children.

The work at Mariaberg in Würtemberg was directly inspired by Guggenbühl at Abendberg. It partook somewhat of the romance but far less of the tragedy of the parent institution. It began under the most fortuitous patronage. The King of Würtemberg after a ^{Mariaberg} trip to Abendberg came back filled with enthusiasm and anxious to emulate the splendid work he had seen there. At home he found an equally enthusiastic supporter in Dr. Rosch. Just at that time Pastor Haldenwang, who had cared for a few cretins in his home in Wildberg since 1835, was sorrowfully and reluctantly giving up his little colony because of lack of funds. This small group formed the nucleus of the new school at Mariaberg.

The next problem was to obtain a suitable building for domiciling the new family. They found it in an old dismantled religious house built under curious circumstances. Years before, Count Hugo's two children, left to play in

the harvest field, were suddenly missed. Count Hugo and his retainers searched everywhere, but found no clue to the lost children. The distracted father, fearing that they had wandered into the forest where they would be devoured by wild beasts, or that they would fall into some neighboring stream and be drowned, vowed that if his little ones were restored to him he would build a chapel to the Virgin. A little while afterwards the children were discovered asleep under a haycock; and the father, true to his promise, erected the "Convent Berg of Our Lady." It was in this building that the new school at Mariaberg was begun. Here, on March 6, with royal patronage, with associations of childhood innocence, paternal affection, and religious zeal, Dr. Rosch began with thirteen children. Led by the highest professional understanding this school steadily developed, and was enlarged, from its first educational activity, by the addition of a custodial department in 1860.

The First Schools for the Feeble-minded in England.

—The work spread from the Continent to England, chiefly through the enthusiasm of Dr. William Twining, who wrote his impressions from a visit in 1843. To this influence was added that of Mr. Gaskall and Dr. Connolly, who wrote on the Bicêtre in 1843. As a result of this agitation, in 1846, the Misses White formed a private school at Bath. The popular movement, however, began with Rev. A. Reed, who visited Abendberg in 1847 and on his return held a great meeting, with the Lord Mayor of London presiding, and successfully enlisted sympathy for practical work. In 1848 the Park House, Highgate, was opened as a temporary home for twenty-seven children, and soon had increased to fifty children, who were removed in 1850 to Essex Hall, near Colchester. In 1853 the pres-

ent institution at Earlswood was founded and the cornerstone laid by the Prince Consort. The two institutions together, Essex Hall and Earlswood, accommodated about 850 children.

The American Movement.—The inspirations for institutions in America found its source in the Bicêtre, where Horace Mann and George Summer made a visit in 1842–1843 and wrote home concerning the work done there. In 1846 a bill was introduced into the legislature at Albany providing for the purchase of a tract of land and for the erection of an idiot-asylum thereon. Here, in 1851, an experimental school was opened in order to demonstrate its value to the law-makers, and in 1854 the school was made permanent.

Massachusetts was a few days behind New York in securing legislation on the subject, but succeeded sooner in starting its school, which was opened under the direction of Dr. Howe, October, 1846. In the same year a private school was opened by Dr H. B. Wilbur, at Barre, Massachusetts. Pennsylvania did not linger far behind these progressive cities in the care of her deficient children. In 1852, Philadelphia, always noted for her broad and liberal philanthropic spirit, opened a school in one of its suburbs—Germantown—under Mr. J. B. Richards. This institution was later removed to Elwyn, Pa., where it now continues with more than a thousand inmates, as the Pennsylvania Training School for Feeble-minded Children, under the direction of Dr. Martin W. Barr, chief physician. Other States followed the leadership of these three in founding schools for mentally defectives, and, though the multiplication of institutions has been rapid, the increase in idiocy has been so much more rapid that many thousands of the feeble-

The First
Schools

minged still remain untaught. In 1909 the Commissioner of Education¹ reported twenty-six State institutions caring for 17,549 inmates, 10,679 of them in schools or kindergarten; and seventeen private schools with 927 inmates, 424 of whom were taught in school or kindergarten. Even with this expansion, however, idiocy has outstripped public provision, and a most rigorous campaign of education will be necessary to bring an adequate response to the demand, which is constantly becoming more urgent.

Special Classes for the Feeble-minded in the Public Schools.—The neglect of the State to make adequate provision for the feeble-minded in segregated colonies has thrown some of the burden of their education upon the public schools. In them the mentally defective are still taught in classes with other exceptional children. Dr. William T. Harris² first called attention to pedagogical “misfits” in St. Louis as early as 1872, but the educational world was not yet ready to study the condition. According to the Bulletin for 1911³, a total of 99 cities had public school classes for mentally defective pupils, and 220 had classes for mentally backward children. Naturally, under the circumstances, the division of school children into mentally defective and backward classes cannot be made with any sharpness, and the organization and methods of class instruction must be similar for the two types.

“The idea of establishing day classes and schools for deficient children appears, however,” says the educational Bulletin, “to have been first introduced to American

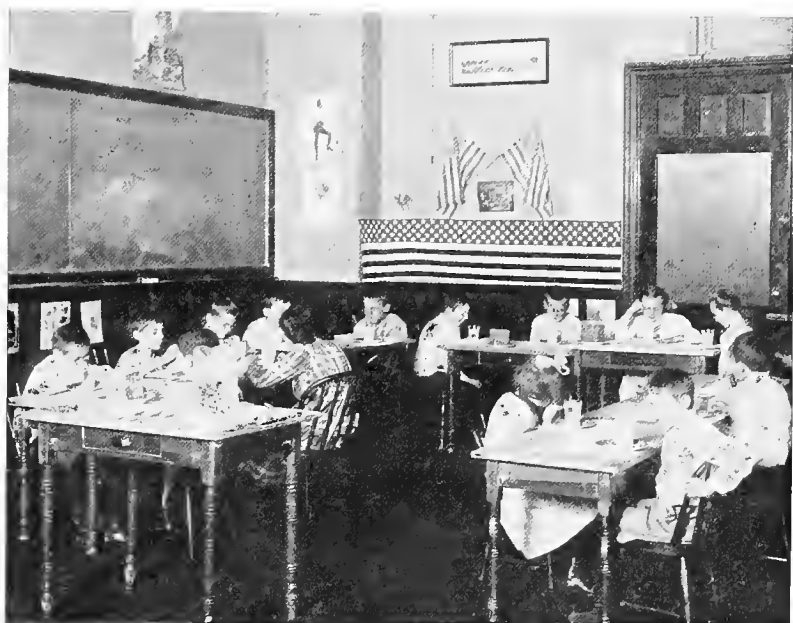
¹ Report of the Commissioner of Education, June 30, 1909, vol. ii, p. 1279.

² Leonard P. Ayres, The Relative Responsibility of School and Society for the Average Child, *Journal of Education*, Dec. 21, 1911.

³ United States Bureau of Education, Bulletin 1911, No. 14. Whole No. 461, p. 12.

teachers by August Schenck, of Detroit, in 1878, in an address to the American Teachers' Association. Dr. Andrew Rickoff, superintendent of schools for the city of Cleveland, acting on Schenck's suggestion, established two classes in Cleveland, limiting them, however, to disciplinary cases. The second class was established in Chicago in 1892. This is still in existence and other special classes have been added. New York established its first class in 1895, under the direction of Miss Elizabeth Farrell. Several other classes have since been formed, and in 1905 adequate supervision was first provided through the appointment of Miss Farrell as inspector of ungraded classes. In the same year, or a year later, a school was organized at Waukegan, Ill., by Supt. Hall, designed for backward children of all kinds, those mentally deficient as well as those retarded through lack of educational advantages."

According to the same Bulletin, "The first city to plan for a complete organization of these classes directly under the city superintendent was Providence, R. I., which formed six classes for truants and disciplinary cases in 1893, and a separate class for backward children in 1896." Springfield, Mass., followed with a special class in 1898; Boston in 1899; Cleveland in 1905; and Portland, Me., in 1906. The first class in Philadelphia for the training of backward children was probably that organized during the summer of 1897 at the University of Pennsylvania by Dr. Lightner Witmer. This was followed in 1899 by a class under the auspices of the Civic Club and the Public Education Society, which was taken over by the Board of Education in 1901. At the present time there are about seventy-five special classes for exceptional children in the various school buildings of the city.



A group of atypical pre-adolescent children at dinner in a special class-room.

The training of mentally defective children so far described owes its impetus and support to physiological education. The early physiologists like Boerhaave, Morgagni and Haller; the philosophers and philologists like Bonnet, Periere and Rousseau, and the philosophical and pedagogical physicians like Pinel, Itard, Seguin and Guggenbühl; the physical educators like Basedow, Guts-muths, and Jahn; the educators and reformers like Pestalozzi and Froebel; all these contributed their share to the new education, some emphasizing the physical and some the mental, but all agreeing that the body and mind must grow together as parts of one organism and not as two separate and distinct entities.

Psychology Applied to the Problem.—Meanwhile a new movement was germinating in the ferment of the times. The “Origin of Species” marked the advent of the genetic method of science. Evolution and not creation explained the problems of biology. This law could not be evaded by any living being, not even by the human soul or mind. A new physiology was the result. Linked as it was to the genetic theory and to the materialism of the times, and growing as it did out of physiology, we are not surprised to hear the new science called “physiological-psychology.” Into the inception and early stages of this new study we cannot go further than to mention Lotze’s *Medizinische Psychologie* of 1857, and the monumental works of Wundt begun by the establishment of his physiological-psychological laboratory at Leipzig in 1879.

The new psychology did not long remain in scientific isolation from real life. Of course, like its forerunner, the “old psychology,” it made almost immediate connections with pedagogy. The genetic point of view, the essential fact that mind develops as well as body, brought forth a

specific application for the new science to the study of child development. Ontogenetic or child psychology, therefore, has become one of its most important departments; so large that it in turn has been broken up into various fields of investigation. One of the most practical of these is the new clinical psychology. Unlike the educational psychology the essence of its application is to study the individual child and remedy his mental aberrations. These studies have taken many forms and developed along many lines.

The Psychological Clinic.—The Psychological Clinic at the University of Pennsylvania was established in answer to a direct call from the educational world. Its roots go down deep into historical causes; its relations with physiology, physiological education and all educational reforms are close and continuous, but the immediate occasion which led to the discovery of an unoccupied field in psycho-pedagogy and to the establishment of the first psychological clinic was the inability of a grade pupil to read and spell.

In 1896 a supervising principal in a Philadelphia grammar school, and at that time also a student in the Psychological Department of the University of Pennsylvania, had under her instruction a boy known to the teaching profession as a chronic bad speller. Being a student of psychology and seeing quite naturally that the science of the processes of consciousness was the one most closely related to the case, this teacher turned to Dr. Lightner Witmer, Professor of Psychology at the University of Pennsylvania, who undertook to ascertain the cause of this deficiency and the proper treatment for its elimination.

Briefly, he soon discovered that the boy saw double.

Glasses were fitted to his eyes and special instruction was begun which soon brought about a marked improvement both in the boy's reading and spelling. Unfortunately his early death from a lingering disease cut short the possibilities of observation and training, but since that time Dr. Witmer has been receiving children for all manner of mental and moral difficulties and treating them at his Psychological Clinic.

He had already had some experience in this special line. In 1889, while himself a student of psychology at the University and also in charge of English branches in a college preparatory school in Philadelphia, he had found a boy with a remarkable defect in ability to learn English. The boy's composition was especially poor, hardly ever containing a single sentence correctly formed. In his mind there seemed to be no distinction between present and past tenses and the endings of many words were clipped off, especially in singulars and plurals, adverbs and adjectives. An attempt at special training revealed a verbal deafness associated with a defect in articulation. An elementary training in articulation remedied the defects and showed itself in a great improvement in all his written work so that he succeeded in entering a college department the following year. However, his deficiency in language was not entirely overcome.

Such experience led Dr. Witmer, as early as December, 1896, to present, in an address delivered before The American Psychological Association, a scheme of practical work in psychology in the following form:

1. The investigation of the phenomena of mental development in school children, as manifested more particularly in mental and moral retardation, by means of the statistical and clinical methods.

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2. A psychological clinic, supplemented by a training school in the nature of a hospital school, for the treatment of all classes of children suffering from retardation or physical defects interfering with school progress.

3. The offering of practical work to those engaged in the professions of teaching and medicine, and to those interested in social work, in the observation and training of normal and retarded children.

4. The training of students for a new profession—that of psychological expert, who should find his career in connection with the school system, through the examination and treatment of mentally and morally retarded children, or in connection with the practice of medicine.

In the summer of 1897 the Department of Psychology in the University of Pennsylvania was able to put the larger part of this plan into operation. A four weeks' course was given under the auspices of the American Society for the Extension of University Teaching. In addition to lecture and laboratory courses in experimental and physiological psychology, a course was given to demonstrate various methods of child psychology, especially the clinical method. The Psychological Clinic was conducted daily where children were presented suffering from defects of the eye, the ear, deficiency in motor ability, or in memory and attention. At the same time the special class already referred to was conducted in which a group of children were taught throughout the session of the Summer School, receiving pedagogical treatment for the cure of stammering and other speech defects, for faults of written language, such as bad spelling, and for motor incoördination.

The Psychological Clinic has taken up into itself what

was good in former educational movements. It recognizes and makes use of physiological education. But, whereas the former movements for the training of mentally defective children were based upon physiology and were conducted by physicians aided by teachers following the group-methods of the school-room, the clinic emphasizes the application of psychology to each individual case. A mental analysis of each child is made. His intellectual idiosyncrasies are noted. His mental capacities are carefully considered. Just what abilities he has and to what degree they may be developed is determined. On this basis, the proper pedagogical approach to his difficulties is studied and pedagogical advice is given. The methods of diagnosis and of instruction are individual throughout and both are under the control and direction of a psychologist. Upon these principles has been founded the Psychological Clinic, which presents the latest advance in the development of treating and training exceptional children.⁴ Beginning as it did in 1896 with one boy, the Psychological Clinic of the University of Pennsylvania has been in continuous operation up to the present, 1912, and during that time has examined over four thousand cases. In the fall of 1909 it was organized and placed upon a broader basis, being open daily for the free examination of children from every quarter. Just what it is, its organization, its equipment, purposes, aims and field, will be discussed in the succeeding sections of this book.

⁴ For more complete history of the treatment of the feeble-minded, see Edward Seguin, *Idiocy*, 1866; *Mental Defectives*, Martin W. Barr, 1904; *The History of the Feeble-minded*, W. E. Fernald, 1893.

II.

CONSTITUTION OF THE CLINIC

The Location.—The first essential of a psychological clinic is a location. For the smoothest and most effective operation a suite of small rooms is expedient. The outer, or reception room, should be furnished with benches and seats where applicants for examination may wait; communicating with this, another room equipped with various kinds of apparatus for the examination of children; and a third, more private than the other two, where the children may be examined alone, or where parents may be questioned without the presence of the children. In moral cases the third room is especially necessary, for it would be extremely tactless, inconsiderate and destructive to the remnant of morality in a bad boy to let him know that his reputation for goodness was entirely blasted in the eye of his parents and of the examining psychologist who is to take the place of friend and adviser for months or even years.

The second, or examination room, should be easily and quickly accessible. If possible, the exit from it to the street should be by some other way than through the receiving room or hall, for in these cases the normal visitors feel most acutely the stigma of their relative's deficiency. To save them from embarrassment as much as possible, as well as to protect the afflicted ones from exciting contact with strange persons and confusing movements through halls or series of rooms, all arrangements should be simple and expeditious.

Material Equipment.—For making examinations, the material equipment must, of course, include various kinds

of instruments. They may be divided into two classes: common means for making ordinary tests and special apparatus for elaborate and intricate examinations. For the first we have a series of spelling words, selections for reading, arithmetic problems, and samples of writing suited to each grade of the public schools and intended to gauge the pedagogical standing of the child of school age or above. Incidentally, such exercises reveal many other characteristics besides mere scholastic proficiency. To the keen observer the simplest reactions of a child under observation possess profound significance. Obedience, temperament, coördination, general intelligence, fearfulness or fearlessness, modesty, egotism, manners, training, nervousness, will, and a host of other emotional and volitional attributes, besides intellectual capacity, may be discovered at the very first and most simple test. In fact, the success of an ordinary examination depends not so much upon specialized apparatus as it does upon the inventive genius of the investigator in the manipulation of the simplest objects at his command, and his tact in drawing out all the powers of the subject. Curious instruments with their polished steel or lacquered brass and mazes of wires are sometimes positively detrimental. They may either inspire an abnormal curiosity and fatiguing intensity of interest in details extraneous to the end in view, or, on the other hand, they may produce a terror in the feeble-minded wholly destructive of any normal results. Common toys, therefore, will often surpass expensive apparatus in utility.

For example, a subject wholly apathetic to incomprehensible devices for attracting attention may arouse himself and take immediate notice of a wooden elephant whose swinging trunk and tail are moved by a pendulum. Curious

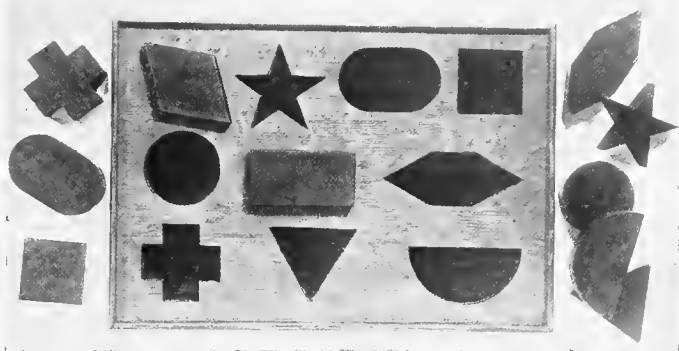
osity is followed by movements revealing coördination; the name of the carved beast is uttered; inquisitive fingers explore its mysteries; a peal of laughter—full of significance for the observer—is evoked by its antics, and beforelong the erstwhile shy and diffident child is completely engrossed in the examination, utterly unconscious of his new surroundings and therefore quite natural. To accomplish this much-desired object a full complement of toys—miniature horses, dogs, cats, deer, birds, balls, marbles, dolls, horns, kindergarten blocks and the like—must be included in the clinical equipment. All the toys should be brilliantly colored and some should squeak, rattle, and ring, for the first requisite in many cases is to arouse the sluggish sensibilities of the child into as much activity as possible.

Next to these commoner things for coördination tests comes the somewhat more technical peg-board, with large pegs and large holes for the lower grades and younger children, and small pegs for higher grades and older ones. The pegs, like the toys, ought to be brilliantly colored. Dyed yarns and ribbons also have their place and serve excellently for testing color perceptual and visual memory-span.

A technical, yet comparatively simple instrument is the form board, a rectangular tray of wood an inch and a half thick, sixteen inches wide and twenty-two inches long, having in its upper surface ten more or less variously shaped depressions into which are loosely fitted wooden blocks of corresponding shapes,—a circle, a square, a rectangle, triangle, star, diamond, hexagon, half-circle and oval. The test consists in placing the blocks in their proper depressions, and the method, accuracy and speed are all factors in the ensuing judgment

The Use of
Toys

The Form
Board



The usual type of form-board, used in clinic examinations. It is a wooden board with ten depressions and ten variously shaped blocks, one fitting each depression. The test consists in having the child place each block in its proper depression.



A modification of the form-board. The figures are cut from white or colored card-board ; two of each shape, and the child to be tested must match the figures by placing each one upon its mate upon the table. The time for the operation can be noted by a watch, and compared with the times of other children. This test will act as a measure of co-ordination, of the subject's perception of visual form ; if the cards are colored, his ability to name colors, match colors and his visual memory-span for colors.

This modification of the form-board is much more flexible than the usual form. In this instrument the places of the various figures can be shifted at the will of the operator and so a new situation can be presented to each child or to the same child after he has tried it once or several times. A number of forms can be eliminated and the complexity of the task can be reduced to any proportions, thus bringing it always within the ability of the child being tested. The more complex the task is, the greater is the intelligence manifested.

of the child's mentality. The full significance of the operation will be discussed under the operation of the clinic.

The technical instruments include many of the pieces of apparatus usually found in psychological and medical laboratories. The audiometer is in constant demand. The ophthalmoscope may be used occasionally, though Snellen's charts will answer most preliminary purposes. The dynamometer may indicate slight differences in the muscular power of right and left hands and lead to the discovery of slight hemiplegia or to the recollection on the part of the parent of an almost forgotten case of "brain fever" or meningitis. The ergograph reveals weakened muscular power, poor coördination and early fatigue. The telegraph key, the sound, touch and sight stimuli, and the chronoscope all play their part in testing the various reaction-times. The esthesiometer, algometer, and the most sensitive plethysmograph often disclose curious aberrations of sensibility. The sphygmograph and the blood-pressure machine are especially valuable in some curious mental disturbances accompanied with cyanosis and an accentuated second beat of the heart. For purposes of record, a complete photographic outfit should be always instantly available, with a rapid lens capable of catching the facial expression, so transient and yet sometimes so important in diagnosis. A dark room with all paraphernalia for developing, printing and enlarging should be at hand. The negatives should be classified, numbered and filed for ready access. They have both a practical and a scientific value.

Closely akin to photographic records are casts of faces, hands, teeth and jaws. They should be made whenever necessary and will contribute their quota to the scientific value of collected data. All the required instruments for

anthropometric measurements form a necessary part of the equipment for physical examinations as well as special medical instruments like mirrors, ear and nasal spectra, tongue depressors and stethoscopes, with appurtenances for keeping all in the safest aseptic condition.

The Clinic Staff.—More important than the whole material equipment is the force of workers manning the psychological clinic. The office of the director and chief examiner should be held by a psychologist.

A Psychologist as Head

Why a psychologist rather than a pedagogue or a physician would seem to follow quite naturally, suggested as it is by the name of the clinic itself. It might be argued, however, that since the large majority of cases handled are intellectually retarded solely through remediable physical causes, and even mentally deficient children, imbeciles or idiots are so through some irremediable central or peripheral nervous lesion, the diagnosis and treatment of all such cases is best directed by a medical man. The contention might be further urged upon the ground that physiological psychology is based upon the theory of psycho-physical parallelism, whose fundamental postulate assumes a physiological correlate for every psychological phenomenon. Physiological functions appear then to be primary. Why not treat them and let the psychical right themselves?

The argument in this form proves too much. It eliminates the psychologist entirely from the realm of science. It leaves for him no field worth while, and therefore it falls to the ground. For regular psychology is too old and well established to be overturned by a logical argument pushed *ad absurdum*.

If the necessity and legitimacy of pure psychology are admitted, the same arguments hold for applied psychology.

Granting that the causes for intellectual backwardness are anatomical or physiological, they are nevertheless manifested in mental or moral symptoms usually first discovered in the school-room; and further, though the physical causes of backwardness are removable by surgical means, the recovery of lost ground is to be accomplished by pedagogical methods which are best directed by the psychological expert and carried out by the specially trained teacher of atypical children.

Added to this is the evident fact that most medical men are already overburdened with the variety and extent of knowledge required for any adequate treatment of physical ills. Even though knowledge were comprehensible by individuals the medical schools are far from ready to include complete courses in psychiatry in their curricula. The historical fact that a psychologist, inspired by a school teacher, founded the first psychological clinic for free examination of children, argues strongly for the continuation of the work by the profession which was equipped to discover and meet the need.

To be a psychologist only is not enough. Careful training and long experience, added to a fairly good natural aptitude, are necessary for the administration of the office. A wrong diagnosis is fraught with the gravest consequences, in waste of money and time and life. The practical psychologist, unlike the physician, does not bury his mistakes. They drag out an existence burdensome to themselves and their friends. It is a grave fallacy to suppose that a teacher, no matter how long experienced in pedagogical discipline, or even a medical inspector or regular practitioner, is fitted without special preparation for pronouncing upon the status of a backward child. Teachers especially are prone to be misled by superficial

Special
Training

appearances, as in the case of a recent test, when a boy was presented before a selected group of very intelligent teachers who questioned and tested him in various ways and pronounced him bright but in need of public school instruction. Their conclusion was largely due to his ease in reading, his volubility, his quick, bright answers to certain questions, his sparkling eyes and flush of apparent health. As a matter of fact, the boy was a middle-grade imbecile with a tubercular diathesis.

The regular practitioner is hardly more expert in his diagnosis. Often he soothes the family by saying that the child will grow out of his stupidity, or that he is suffering from pressure on the brain. In any case he makes no attempt at a differential diagnosis, nor is he ready to suggest any remedy.

The need of special training is recognized more and more widely. Charitable organizations are seeking specialists for examination of their children. In at least one large city such an examiner is attached to the juvenile court and it is his business to pronounce upon every case of suspected mental or moral abnormality. Some insane asylums have resident psychologists associated with their chief medical advisers. All this indicates the importance of the service rendered and the growing necessity for special training in the diagnosis, treatment and training of backward and mentally deficient children.

The Medical Examiner.—What has been said of the necessity of a trained psychologist must not be construed to mean the elimination of the medical examiner from the clinic. The importance of physical defects in mental deficiency demands the skill of a medical examiner preliminary even to that of the psychologist. For, in every case, the first requisite for any adequate determination of

a child's mental condition is the removal of all physical obstructions to sensory impressions and motor expression. For example, double otitis with deafness will cut off a world of incoming auditory impressions and consequently affect the sufferer's vocal expression both by reducing the number of his ideas and by preventing the clear articulation of the few words he uses. Such children are very frequently classified by teachers as "dull," "stupid" or "feeble-minded." A girl was one day brought to the clinic by her mother because the teacher said the child was hopelessly incapable of learning. A cursory examination by the medical examiner revealed the fact that the girl was very hard of hearing. Further questioning elicited the information that the teacher would explain some problem only parts of which were heard by the child, and when she failed to perform the operation correctly, as she inevitably did, the teacher lost patience and relegated her to the class of feeble-minded. Defective vision, adenoid growths, retarded and impacted dentition, heart lesions, rickets, phthisis and indigestion have all, at one time or another, been diagnosed by non-medical persons as "feeble-mindedness."

A part, therefore, of a mental classification is a preliminary physical examination made by a medical attendant except in the lower grades of imbecility where no doubt can exist as to the ultimate disposal of the case. In regular clinical practice, mere suspicion of physical defects is sufficient. For a complete diagnosis of a suspected ailment the patient should be referred to a specialist. His opinion is final. If he advises surgical relief or medical treatment, it should be given before proceeding with the mental examination. In all the higher grades on mental deficiency a diagnosis cannot be established while certain physical

defects are present which may be the cause of only temporary intellectual retardation.

THE SOCIAL WORKER, HER DUTIES AND QUALIFICATIONS.—In addition to the psychologist and medical examiner a social worker is an almost indispensable member of the clinic staff. From the nature of the case, the post usually falls to a woman, first, because it is nearly impossible to secure a man for the place, and secondly because dealings with children and mothers in their homes demand the services of a woman. Her natural qualifications should begin with a fair share of sympathy, generally termed humanity. In personality, she should be agreeable, tactful, persistent, courteous, firm and withal determined to arrive at some specific result. In temperament she should not be extreme, neither too practical and concrete, nor too theoretical and abstract. Mentally, she should be able to grasp the larger problems of statistical values and the cumulative evidence of certain trends in sociological forces, and she should never permit her sympathy for individuals to confuse or obscure the relation of individuals to the larger problems to be worked out. Therefore, she should have a grasp of the sociological field, its fundamental principles, and its primary causes, as well as its most efficient methods and practices; and added to this a lively interest in statistics, both in their gathering and framing in the most practical forms for direct uses.

Her training should include both theory and practice. The first is to be acquired in a thorough study of the elementary methods of modern psychology. A laboratory training is valuable both for the knowledge that it gives and also for the discipline in method as well as for the proper evaluation of facts which lie at its foundation. Upon this should be built a most comprehensive training

in the field, first, of child psychology, and secondly, of sociology and economics.

Added to theory must be a wide practical social experience with people and organizations. To meet and deal with people as individuals demands always ^{Her Practical} actual experience combined with an innate tact. ^{Experience}

To deal with organizations, and especially to become familiar with their methods, is a matter of study and experience which can be acquired. For the best results a sharp and clear distinction should be made between psychological clinic social worker and a social worker attached to a psychological clinic. While indeed the distinction is one of verbal emphasis, nevertheless its translation into practice results often in an emphasis of energy, time and thought. The social worker attached to a psychological clinic in contradistinction to a psychological clinic worker tends to look upon her work as distinctly apart from psychological results. She will be strongly disposed to measure the outcome of her efforts in terms of cleanliness, good clothes, improved environment, or the disposal of the "case" in some "good" institution.

The duties of the social worker can be divided into two classes: at the clinic and outside the clinic. At the clinic, it falls to her to make arrangements for the reception of the cases, to make appointments for them at the other clinics to which they are referred for further investigation, to see that the various instruments are ready for use, and in all things to assume the relation to the examining psychologist or medical man that a trained nurse does to the surgeon at a clinical operation.

Outside of the clinic her duties will carry her far afield, for whatever the future may bring forth, the present state

of ignorance on the part of parents demands that some one urge them to follow the simplest rules for hygiene or medical treatment. The social worker is the one who will visit the homes of the children, study their social conditions and the bearing of these conditions on the mental and moral state of the individual; will work with the parents, persuade, insist and persist until the proper treatment and training as far as possible is carried out. Oftentimes, but purely secondarily, and with due care not to undertake the duties of charitable organizations already in the field, it will be necessary to procure and distribute clothing for some children. However, at this point the psychological clinic social worker must guard against the already rank evil of multiplication, reduplication and overlapping of charitable functions. If she holds constantly and clearly in mind the fundamental purpose of a psychological clinic, good sense will enable her to deal with individual cases which no general rules can ever possibly cover.

To illustrate both the value and range of her services, one instance is here given. Case 268, a tubercular boy, was referred to the Psychological Clinic by an anti-tuberculosis society for a mental examination. He was brought by his mother, who was also suffering from tuberculosis. Inquiry revealed the fact that the father was in an even more advanced stage of consumption, but was compelled to peddle for a daily living. Charitable societies were furnishing fresh eggs and fresh milk for the consumptive patients. The food was divided between the sick and well members of the family. The boy received a cup of milk and one egg boiled for breakfast, one cup of milk about ten o'clock, often no midday lunch and usually only coffee for supper. He refused to take his

Duties
Outside the
Clinic

A Case
Requiring
the Social
Worker

eggs raw because he liked them boiled. During the day he was away from home on the streets, no one knew where, doing odd jobs, smoking cigarettes and eating candy or cakes when he could procure them. Naturally he had no appetite at night for wholesome food.

Under conditions like these, it was impossible to secure satisfactory reactions to mental tests. Judging by his posture, carriage, inattention, response to particular stimuli and liability to fatigue, the boy was far from normal mentally. But could not his retardation be accounted for by his disease and by his home surroundings? Or, on the other hand, was he congenitally deficient through tubercular inheritance? Observation under proper conditions, with regular diet and hygienic treatment, was necessary before any final classification of the boy's mental status could be made.

How to secure such conditions was the next question. The family were foreigners. Both the father and the mother were wholly incapable of enforcing hygienic discipline even if their ignorance did not preclude their appreciating the need of it. Yet measures must be taken promptly if anything was to be done.

The demand for the social worker was peremptory. Accordingly she immediately visited the home, insisted upon some housecleaning, advised unlimited fresh air, frightened the boy into temporary better behavior and aroused a little better conception of parental responsibility in the father and the mother. Recognizing these as temporary measures, and the neighborhood as impossible for any measurable betterment of the boy's physical condition, she laid the matter before several aid societies and quickly had the boy removed to the country home where he received the treatment and environment necessary to

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arrest the progress of his disease. All of her work was necessary and preliminary to the mental classification of the boy, and as such was directed by the Psychological Clinic.

As the work of the clinic grows, the social worker will be brought into one more field of duty, namely, the organization and training of a group of volunteers. Here again her administrative and executive ability will be called on. If she can furnish these qualities she will be able to develop for many philanthropically inclined persons a field of activity in which they can use their time most valuably for an all too much neglected class of helpless human beings. Already some very good work has been done in this field by volunteers.

THE RECORDER.—Connected with the staff there is also a recorder, who is an expert stenographer, and who takes accurate notes of the examinations of each child, records them in a prescribed form and files them in a regular systematic way, ready for examination at any time by students and others interested in scientific research upon problems connected with children. Usually a young woman fills the position.

In addition to her stenographic ability she must be familiar with methods of filing, acquire or possess a vocabulary of the technical terms used in reporting cases, and should be able to use judgment in including intrinsic or omitting extraneous matter. Verbal reports are often very voluminous and contain much that is irrelevant. The examiner does not always have the time to say just what should be included in the written reports, and therefore must rely upon the judgment of the recorder.

III.

THE PSYCHOLOGICAL CLINIC: ITS FUNCTION AND ITS FIELD

The Psychological Clinic is Not an Experiment Station.—To the mind imbued with the ordinary notions of psychology as a more or less abstract science a Psychological Clinic suggests immediately the means of organization provided to gather scientific information concerning abnormal or aberrant minds. Consonant with this conception, the clinic is thought to be merely an experimental station, or a psychological laboratory wherein interest with the human subject ceases with the record of his reaction. Such a view is to a certain degree erroneous. The clinic is not merely an experiment station nor merely part of a psychological laboratory. It is something more and something different in purpose and organization.

Neither is it a Training School.—Another and more prevalent view held by many classifies the clinic as a training school. Here again the view is partially true but primarily erroneous. Pedagogical advice is indeed freely dispensed in many cases and pedagogical training is supervised in many others, but the primary purpose of the clinic is not teaching. While it maintains always a very close and active relationship with all schools, it would be misleading to confound the two organizations in purpose, functions, or results. The clinic comprises a school and other features as well. It is more than a school in that it aims at a larger result than a school would do, and attains its results by methods far more varied than any pedagogics yet applied.

The Clinic Ministers to Every Special Child.—The clinic takes on such manifold and divergent forms of service and embraces such a wide field of subjects that it is practically impossible from description alone to furnish an adequate idea of its numerous activities. In brief, its function is to restore the special child to normality or as near normality as possible. Its field includes every special child. Its services are free to all of them. It is an orthogenic agency in the widest sense of the term, devoted to restoring abnormal children to normal intellectual or moral capacities, or ameliorating their condition as far as circumstances will permit. In doing this it directly ministers to the needs of the whole child. No item of health is too remote to be neglected or overlooked. The clinic diagnoses mental or moral ills, dispenses pedagogical advice, supervises training and follows up the case until the child has secured all the aid that modern science and modern philanthropy can give. In performing such service it calls into coöperation all child-welfare agencies within reach. In this respect it is a great federating agency focusing upon special children—morally or mentally sub-normal or super-normal—the already existing forces of society, and, whenever necessary, supplementing these by adopting new methods and measures from the science of psychology. Throughout it all, it maintains a scientific spirit. In every department of its service the most advanced methods science has to offer are brought to bear,—in mental diagnosis, in turning to the latest surgical and medical experience for relieving physical obstructions to mental growth, in applying the most advanced pedagogical methods of individual instruction to mind-development, and, finally, in the storing of the knowledge gained in each case in such forms as to make it readily available for research work. These few

A Federating
Agency

and brief enumerations, not descriptive but suggestive only, must here serve to give a rapid and cursory view of the clinic's functions. If all its multifarious duties and activities could be expressed in one phrase which at the same time would express its nature by its essential function, the clinic could probably best be denominated "a clearing house for special children." In the following chapters these matters will be dealt with more in detail.

Its Function is Both Scientific and Practical.—For a brief consideration in this chapter the functions of the clinic may be conceived as at once scientific and practical. Theoretically the two functions may be conceived as co-ordinate, or one or the other may be assigned a primacy in importance according to the logical exigencies of the matter in hand. In practice there is no hesitancy about assigning the practical function to the place of primary activity. Every child who comes to the clinic comes for help. The parents, guardians, teachers, societies,—all who bring children for diagnosis and advice,—are confronted with the practical disposal of their charges and all of them want to know what to do. From this point of view statistics are secondary in importance. Happily, these two functions are in no wise mutually exclusive. Both can subsist side by side without interfering with the greatest possible amount of relief to each child or with the accurate compilation of data. In fact, the highest development of both functions leads to the best results on the whole.

The two-fold function may be further analyzed into various fairly definite tasks. Among these are collection and filing of data; the development of the best clinical tests for measuring the mentality of children; the training of teachers and social workers for service among mental defectives; the diagnosis of mental diseases; and the most expeditious and satisfactory

Tasks of
the Clinic

methods of connecting backward children with the proper sources of aid for relieving or ameliorating their condition.

Manifestly all of these activities cannot be fairly treated within the compass of one monograph, and therefore some must be omitted from any minute consideration in the present work. Notable among these omissions will be the special training, observation and daily care administered by the clinic through the Hospital School. While much reducing the magnitude of our descriptive task, this procedure will still leave a large amount of detail to be handled in a brief space. In order, however, to give a reasonably consistent picture of clinic operations, an effort will be made to describe all the major and minor activities, as nearly as possible in the relation in which they occur in actual practice, but some with greater detail than others. At the same time the endeavor will also be made to lift the clinic clear of its multitudinous duties and its intricate relations and to present it as a perfectly definite social entity, with a unique function, a clearly circumscribed field, and a thoroughly practicable end. To a large extent, the activities to be described may be grouped about the central function of mental classification, and for the sake both of clear presentation and of economy of space, this monograph will so treat them.

The Task of Collecting Scientific Data.—The task of collecting scientific data, though but briefly touched upon here, is vital to the practical work of the clinic and of great present and future value to psychology as a whole and especially to its abnormal phases. Studies of individual children by the best scientific methods under the directions of specialists are being constantly made. The data so gathered, with all the collateral data coming in from all the various classifications by specialists in other

clinics, with the social worker's report based upon a personal inspection of the home, the pedagogical reports consisting of samples of writing, spelling, and manual work of the child, with the photographs, dental and facial casts, are all carefully classified and filed for future reference at the University of Pennsylvania. Over six hundred are on file at the present time and the material contained in them is already becoming of great scientific value. As time passes and the collection increases the value of such documents will increase in a greater ratio.

The Testing of Mental Tests.—For purposes of classification many tests and systems of tests are being tried out. Some are being rejected and new ones discovered. Many tests which may be entirely applicable in other places and for other purposes are not practicable at a psychological clinic examination. The quantity of apparatus demanded, the length and intricacy of the test itself, the amount of book knowledge and special training necessary for the examiner himself, or the amount of intelligence assumed to reside in the child under examination may make a test of mentality useless for clinic work. This application and development of tests is comparatively new by reason of the short history of the psychological clinic itself, but it will eventually furnish a valuable and prolific source of scientific investigation.

The Training of Psychoclinicists.—Another new departure found to be necessary by experience is training psychologists to become examiners in psychological clinics, training teachers for backward and defective children, and training social workers for service in connection with hospital clinics. In the first field, graduate students in psychology are finding a new line of progress analogous to the laboratory experimentation in systematic psychol-

ogy. Their natural bent for scientific investigation takes the very practical form of the study and classification of mentally defective children, in which are involved problems sufficiently intricate and sufficiently deep for any intellect, and at the same time methodical enough to give the requisite training for original research.

In addition to this scientific opportunity, the demand arises not only from psychological clinics, but for psychologists as examiners to insane asylums, juvenile courts, charitable organizations, and other institutions working for the welfare of children. The mental condition of children everywhere is being considered as it never was before, and the need of expert ability to decide upon the causes of mental and moral deviation is becoming apparent in all these fields of activity.

The Training of Special Teachers and Social Workers.—The extension of the training of backward children, both in the public schools and private institutions, has created a demand for certain kinds of teachers. The ordinary grade teacher of a public school, with the talents which she usually possesses, is perfectly adapted to such work providing she can first secure the necessary grounding in psychology and a practical experience for this new work. Both of these opportunities the psychological clinic can readily furnish.

To the social workers a new field has been opened in connection with hospitals and clinics. To meet the demand the Psychological Clinic, through its social service department, enables those who wish it to secure the necessary practical experience required in such work, and at the same time through courses in child psychology to add to their practical training the theoretical knowledge required in any work with children.

The Supervision and Education of Special Children.

—Involved in what we have called the practical side of the clinic functions, among which classification is the chief, are several other minor yet necessary activities for making the most expeditious final disposal of not a few cases. One of these is the supervision of pedagogical instruction and moral training where either is necessary to determine the mental or moral condition of the child under investigation. To this end the clinic administers directly to the teachers, parents or guardians in charge of backward children advice which they can follow out in the home, or at such other places as may be suitable. In this way the clinic becomes an educational dispensary.

Supervision must be continued as long as doubt exists upon the question of mentality, often for months or even years. Upon such training, and upon judgment based on its results, sometimes depends the future of the child, whether his remaining years will be spent in an institution or a few of them in some special school with the prospect of his ultimate return to a normal social life.

One clinic case, a boy addicted to stealing, was under various modes of training for nearly three years, and at one time almost sent to a reformatory as hopeless. The scale was finally turned in favor of mere temporary badness and the boy to-day is creditably and faithfully filling a position in a business house, though he is yet so young that final judgment cannot be pronounced. A similar situation obtains with a mentally retarded girl who first was examined in the summer of 1908, and who since that time has been under the most expert training and observation without yet yielding a satisfactory account of her true mentality. In this exceedingly baffling case, possibly ten years more will be

Illustrative
Cases

required to settle finally the theoretical classification of the child. Happily, in such instances where the doubtful cases fall into the good hands of the clinic, and are not left to the ignorant neglect or to the equally unintelligent domination of parents or guardians, no time is lost in the development of the children and no injury done by false methods of training. For such cases the Hospital School is an invaluable aid to the clinic.

A further activity grows naturally out of the one just described. In many instances where children cannot be entered in the Hospital School, the clinic through its social worker supervises the administration of medical treatment under the direction of a physician and secures, if possible, improvement in diet, sleep, bathing and other essentials of hygiene, at the child's home or in some temporary charitable institution. Such action is often indispensable to a final mental classification by excluding physical factors. The good offices of the same social worker are often used to secure admission to asylums or schools for the children needing institutional care, thus finally disposing of such cases.

Its Central Function is Mental Diagnosis.—All of these educative, remedial, and restorative measures are logical auxiliaries to the great orthogenic purpose of the clinic and minister directly to the welfare of the atypical child, either of this generation and, indirectly, by training new workers in this field, to the welfare of succeeding generations. This supreme mission of the clinic to all special children, its present far-reaching and ever-increasing scope of usefulness, must never be lost sight of while the mind is occupied with any of its phases. Mental classification is important, even necessary, for correctly dealing with any case of mental or moral deviation, but

it is not the whole activity of the clinic. So closely knit are the various processes of the clinic that almost any important one of many might be chosen as the centre around which to group the others. Our choice is made for purposes of description and the best that can be said is that it does not increase the confusion of a reader unacquainted with the operation of a psychological clinic. So large a place, however, does mental diagnosis play in the total activities of the clinic that upon it rests a large share—though not all—of the social importance won by the clinic. Let us examine a little more closely into this phase of the matter.

Mental Diagnosis.—A mental diagnosis, in brief, is the classification of an exceptional child according to his mental capacity. A clinic diagnosis places emphasis upon individual examination. For the word "clinic" springs from an etymological root meaning "bed," and, in strict consistency with the original meaning of the word, the clinic should deal with the patients reclining in bed. This, of course, is not done in a psychological clinic. Actual practice here, as elsewhere, has modified the meaning of the term and has retained chiefly that portion of its significance, clearly only incidental, which connected individual treatment. The action of time and force of circumstances have therefore minimized what was once primary and magnified what was once secondary.

It is with the individual then—the whole individual—that the psychological clinicist deals in making his diagnosis or mental classification. No one symptom or group of symptoms representing disease of some organ or group of organs is to be recognized and treated. By the very nature of the case every functional derangement and anatomical abnormality discoverable by the most careful

and comprehensive examination of the whole subject in his physical, mental, and social nature must be taken into full account and be given its due place in the final conclusion.

In this respect of the complete scrutiny of individual cases, the work of the psychological clinic is sharply differentiated from the medical inspection of school children, whether made upon single pupils or upon groups of pupils. In point of thoroughness the two operations are hardly comparable, though they can be made mutually supplementary and more effectual by using the method of group inspection for discovering and sending all children suspected of mental defect to the clinic for final classification.

The Danger of Unskilled Mental Diagnosis.—By this individual and comprehensive examination the clinic offers itself as a place where a free, full, and careful mental diagnosis can be had for any suspected child, with the assurance to the parents or guardians that the work will be conducted by experts specially prepared by training and experience for the work. Much mischief has been wrought in the past by well-meaning but unfit persons with their off-hand relegation of backward children to the general class of "feeble-minded" or "moral degenerates" without intelligent examination of the cases or just appreciation of the meaning or the consequences of the term applied. For one thing, the pronouncement by any influential person that a child is morally or mentally abnormal, under the present conditions of ignorance and prejudice of society, lays upon the child an undeserved and wholly unjust odium. Often, too, such a statement paralyzes all efforts to help the child so condemned. The willing but uninformed parent deems all effort at further education useless. The avaricious and the needy parent sees a possibility of

removing the child from school and putting him to work. The ambitious parent is completely discouraged in his plans for the future of the child. All agree that if the child is an imbecile it is useless to try to mend the work of Providence, that the will of God should be accepted with resignation. A case is on record of the entire neglect of a child, the daughter of a well-to-do professional man, until about her eighth year, when she was mentally equal to a high-grade idiot, gibbering in the corner of a room, unable to speak more than three words, much less to read, write or perform the usual acts of a child of her age. After about one year of training she had almost overcome her echolalia, could speak in simple sentences, answer ordinary questions intelligently, read in a primer, write a few words, and conduct herself with the manner of a little lady.

The Effect
Upon
Parents

Society, as a whole, is as indifferent to the fate of its feeble-minded members as individuals often appear to be. The teacher frequently pronounces them unfit and the school turns them out. The parents may neglect them to the point of cruelty but not beyond. The weak-minded among the poor may roam the streets, as they frequently do in large cities; they may eke out the family income by gathering wood and coal wherever the fuel can be found; they may beg for pennies, clothes, or meals; they may from year to year degenerate into deeper idiocy and the depravity of petty vices, but as long as they and their guardians keep within the pale of the law as it applies to *normal* persons in full possession of their senses, no one can interfere to compel any effective effort toward the permanent amelioration of the dement's condition or to protect society from the inevitable effects of its own neglect. If this is not universally true in America in theory,

Social Care
of the Fee-
ble-Minded

it is almost universally true in practice. And what is more and what is worse, the state institutions for feeble-minded are so crowded that when philanthropic efforts are made to secure an unfortunate's best welfare by entering him in the proper institution, a long waiting list of previous applicants effectually blocks the well-intentioned plan.

The Psychological Clinic Makes an Expert Diagnosis.—The psychological clinic makes a real—in fact, a *quasi* official—diagnosis. This at least is the usual effect. Those who bring the children feel that time and skill in full measure have been devoted to the problem and that the pronouncement is valid and the advice good. Usually, therefore, instead of entirely neglecting their charges or else dubiously spending their energies in half-hearted attempts to aid them, they willingly follow the directions given and bend their energies to persistent and effective efforts to benefit them. Few persons realize the weary years and wasted money spent by some sacrificing people in misguided attempts to help their children. One charitable organization is reported to have placed a boy in its charge in ten different families, having him cast back on their hands ten times before it was discovered by examination that he was an imbecile. Case C. F. was brought by his aunt to the clinic when he was eighteen years old and an idio-imbecile. The good lady had spent all her income for years and much of her principal, and had wasted practically all her life in weary peregrinations from school to school and trainer to trainer seeking advice for her nephew. From not wholly disinterested people she had received reports of his mentality stating that the boy possessed all degrees of intellectuality from “very bright” to “hopelessly idiotic, with pressure on the brain and the certainty of dying before he was thirty.” It is of little

wonder that the poor woman was almost as much distracted as her nephew.

But the clinic does more than merely classify. If ignorant or careless parents fail to follow the advice given, the clinic possesses the means through its social service department of following up such cases with unremitting efforts until it secures finally for the child the treatment he should have. In two ways then the clinic offers society the most efficient means yet organized for dealing decisively with its exceptional children: first, classification that is a *bona fide* diagnosis; and second, a follow-up system that accomplishes results.

A Diagnosis Prevents Neglect.—In this perfectly defined sphere its services are indispensable in theory as well as practice. For a backward or mentally defective child will suffer from either one or the two alternative courses—neglect or overtraining. If neglected at home and misunderstood at school under the vague and vain delusion that he “will outgrow his dulness,” the feeble-minded child is allowed to roam the streets at will, he speedily picks up the bad habits to which his class is so prone, and steadily deteriorates mentally and physically until a precocious aptitude for crime lands him in some penal institution or an early-acquired shiftlessness enlists him in the great army of ne’er-do-wells or beggars. In either capacity he remains a threat and a burden to the community.

Several such cases have come to the notice of the clinic. A boy thirteen years old was brought by the superintendent of a House of Refuge on account of moral delinquencies and backwardness in learning. He had been placed in a special class, but did no better. At the Refuge he made no educational progress.

To mental progress was added incorrigibility. He was committed to the Refuge at eleven years of age after three arrests. The first was made for taking a horse to a stable and having it shod preparatory to a wild-west ride. The second and third arrests occurred after his thieving operations had been reduced from horse stealing to petty larceny, once from a gas meter and once from a house.

A Case of Neglect After his parole from the Refuge at the age of thirteen, trouble still pursued him. In school he could not learn even in the first grade and would not obey. Outside of school his activities expressed themselves in planning petty thievings, the last of which consisted in purloining five nickel-plated steam valves, three of which he sold for a few pennies. This escapade brought him again into the Juvenile Court, and, at last report, he was waiting sentence at the House of Detention.

One is sorely tempted to pause here and ask the ancient question: "Who sinned? Society or the boy?" Surely an early and proper diagnosis of his case would have assigned him to a training school for mental defectives where he would have been trained in some occupation suited for his limited powers, and his family, his teachers, truant officers, policemen, courts, refuges, and all the other misused forces of society would have been free to apply themselves to better ends. But the years have gone. The boy has passed his learning time. Worse, he has degenerated both in mind and habits. Henceforth, society must keep him as a delinquent, or if he goes free, suffer his depredations.

A Diagnosis Prevents Overtraining.—The opposite method of treatment or overtraining usually springs from the ambition of the parents. It is quite natural for a father or mother to want a son or daughter to profit by

all parental experience, to avoid their mistakes and to accomplish what they failed to do. Knowing the best side of their children, and clinging to the last shred of hope, they are loath to believe the child of their ambitious hopes can not only never realize them in the remotest degree, but actually must be assigned to that fearful class known as "weak-minded."

Seizing upon the child's marvellous memory for obscure and detached details, or upon its wonderful musical ability, the parents dwell upon these qualities to the exclusion of all weaknesses. To their minds such a child *must* be able to learn. It must be laziness, or inattention, or carelessness that prevents advance in school. Having a zeal without knowledge, they press the poor, weak brain to tasks entirely beyond it. They harass and torment the child until high-grade imbecility falls to lower grades or the abysmal gloom of idiocy covers the shattered mind and shields the little one from further persecution.

Not long ago a woman brought her daughter for examination. The girl was twelve years old and to the bitter disappointment of the mother, who had been a school teacher, she had never been able to pass the second grade in public school. The good woman, possessed with that little knowledge which is a dangerous thing, told, with tears in her eyes, all her ambitions for that daughter,—of how she had stayed up nights until one o'clock, teaching, drilling, beseeching, scolding and promising, in the hopeless effort to give that girl an education, without which, the mother said, "a person might as well be dead." The girl was, in fact, a middle-grade imbecile, fit indeed for housework or other manual occupation in which she would have found her life's happiness, but utterly destitute of the mentality

A Case of
Overtrain-
ing

needed for her mother's high ambitions and made continually worse by her mother's constant forcing.

Even more recently, a well-educated and fairly successful business man admitted that he had long nursed the ambition to make his imbecile son a physician, and gave it up only when adolescent expansion reached high tide and ebbed again without carrying the boy beyond the third grade in school.

Such instances are too pathetic for adverse criticism. They grow out of the best there is in the human heart. The hopes and fears, prayers and sacrifices of mothers and fathers for their children are not for a moment to be deplored. It requires effort and a determined purpose to do for the best, to disabuse parents' minds of false hopes and to turn their energies in the right direction for the betterment of their unfortunate children, but it must be done. To do it and to do it early enough requires psychologists skilled in diagnosis of imbecility.

The Field of Clinic Operations.—The foregoing sharp definition of the functions of the clinic may seem to restrict the field of its operations. To a superficial observer, or to one unfamiliar with the true state of affairs regarding backward and deficient children, small reason may appear for the foundation of such an institution. However, the full force of the necessity and the almost overwhelming demands to be made upon its services will be gathered from a careful consideration of statistics both of the curable and incurable backward cases of mental or moral deviation recorded or estimated.

The Extent of Retardation in Public Schools of America.—In the last few years increasing consideration has been given to the whole problem of backwardness or retardation in public schools. What is meant by "back-

wardness" and "retardation" will be explained later. Just now we are concerned with the facts discovered by statistical inquiry made in a number of larger and smaller school systems of the United States.

Early Investigation of Retardation in Schools.—As early as 1872 Dr. William T. Harris called attention to retardation in the public schools of St. Louis. Superintendent Maxwell of New York City, in his annual report for 1904, showed that 39 per cent. of the pupils in the primary grades were above normal age. These preliminary motives were followed by Superintendent James E. Bryan's investigations into the public schools of Camden, N. J.

Reports of 1905-06 show that in that city the percentage of children two years or more behind the grades proper for their ages was as follows: first grade, 13½ per cent.; second grade, 24 per cent.; third grade, 33 per cent.; fourth grade, 38½ per cent.; fifth grade, 35 per cent.; sixth grade, 30 per cent.; seventh grade, 32½ per cent.; eighth grade, 14⅞ per cent.; and an average of all grades of 26⅓ per cent., or more than one-quarter of the entire school enrolment.¹ His figures show further that for 1905-06, 72 per cent. of all the pupils were at least one year older than the age assumed by that particular school system as the standard age for each of the several grades; 47 per cent. were more than one year older; 25 per cent. were more than two years older, and 12 per cent. were more than three years older.

¹ A Method for Determining the Extent and Causes of Retardation in a City School System, James E. Bryan, *The Psychological Clinic*, vol. i, No. 2, April 15, 1907, pp. 41, 42.

Also see article "The Need for Special Classes in the Public Schools," J. D. Heilman, *The Psychological Clinic*, vol. i, No. 4, June 15, 1907, pp. 104-114.

Five city school systems were investigated by Dr. Cornman. "The actual number of children of each age in each grade is given for these cities in the following order: Camden, Kansas City, Boston, Philadelphia, New York. It will appear that the five cities bring under consideration 755,928 children, approximately 5 per cent. of the children in the elementary schools of the United States. If we follow Superintendent Bryan and regard a first-grade child of seven years of age or over as beyond the theoretical age limit for that grade, and a second-grade child of eight years as over and beyond the theoretic age limit for that grade, and so on throughout the grades, we find 61 per cent. of the children beyond this age limit. Boston has the smallest percentage, 51 per cent., and Kansas City the largest percentage, 77.6 per cent. If with Dr. Maxwell we use the term 'above normal age' for a child one year beyond his theoretic age limit, *i.e.*, a first-grade child of eight years or over, it appears that 31.6 per cent. are above normal age. Boston again has the lowest percentage, 21.6 per cent., and Kansas City the highest, 49.6 per cent. If we take Superintendent Bryan's definition of a pedagogically retarded child as one two years beyond the theoretic age limit for each grade, then 13.5 per cent. are pedagogically retarded, the limits ranging between 7.3 per cent. for Boston and 26.3 per cent. for Camden and Kansas City. Table VII also reveals that of the children of these five cities, 4.9 per cent. are three years or more beyond the theoretic age limit, and 1.5 per cent. are four or more years beyond the theoretic age limit."²

² The Retardation of the Pupils of Five City School Systems, Oliver P. Cornman, *The Psychological Clinic*, vol. i, No. 9, February 15, 1908, pp. 245-257.

Dr. Cornman's findings were largely expanded and in some measure corrected but not materially altered by Dr. Roland P. Falkner, in the May number of the *Clinic* for the same year.³ In all later instances where investigations have been made, practically the same state of affairs has been brought to light, and this in spite of the contrary opinion of some school experts upon the subject. An illustration of both the magnitude of retardation and the unawareness of school men with regard to conditions is furnished by the following statement: "In an article in *The Teacher*, December, 1907, Dr. Witmer comments upon this fact in discussing the evolution of special classes in the Philadelphia schools. Before attendance at school was enforced by law the Superintendent had reported that there were not enough backward children in any neighborhood in Philadelphia to form a special class. By 1900 there were reported 1122 children in the schools too backward for the usual grade instruction."⁴

Later Investigations.—The most recent utterances upon the subject of retardation in public schools come from the investigators working upon the Russell Sage Foundation. They have taken up the problem in the United States upon a basis commensurate with its magnitude and importance. The results of their researches into thirty-one cities in America have been published by Leonard P. Ayres, secretary of the Backward Children Investigation, in a volume entitled "Laggards in Our Schools." It is the latest as well as the most comprehensive compila-

³ Some Further Considerations of the Retardation of the Pupils of Five City School Systems, Roland P. Falkner, *The Psychological Clinic*, vol. ii, No. 3, May 15, 1908, pp. 57-74.

⁴ Provision for Exceptional Children in the Public Schools, James H. Van Sickle, *The Psychological Clinic*, vol. ii, No. 4, June 15, 1908, p. 102.

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tion extant of facts and discussions of remedial measures in America. Chapter IV presents a condensed discussion of backwardness among school children and a summary of results in tabular form. For the thirty-one cities the percentages are as follows:

TABLE 22.—PER CENT. OF RETARDED PUPILS:
THIRTY-ONE CITIES.

City.	Per Cent. Retarded.
1. Medford, Mass.....	7.5
2. Waltham, Mass.....	10.6
3. Meriden, Conn.....	13.0
4. Quincy, Mass.....	17.9
5. Aurora, Ill.....	18.3
6. Boston, Mass.....	18.5
7. Malden, Mass.....	18.5
8. Fort Wayne, Ind.....	23.3
9. Springfield, Mass.....	23.3
10. Decatur, Ill.....	29.9
11. Newark, Ohio.....	29.9
12. New York, N. Y.....	30.0
13. Portland, Ore.....	30.7
14. Reading, Pa.....	31.6
15. Trenton, N. J.....	32.0
16. Utica, N. Y.....	32.6
17. Woonsocket, R. I.....	35.4
18. Troy, N. Y.....	35.6
19. Philadelphia, Pa.....	37.8
20. Wilmington, Del. (white).....	37.2
21. Columbus, Ohio.....	37.3
22. Los Angeles, Cal.....	38.3
23. York, Pa.....	38.3
24. Kingston, N. Y.....	38.4
25. Baltimore, Md.....	46.3
26. Camden, N. J.....	46.3
27. St. Louis, Mo.....	46.6
28. Kansas City, Mo.....	48.5
29. Memphis, Tenn. (white).....	51.3
30. Cincinnati, Ohio.....	58.7
31. Erie, Pa.....	60.1
32. Wilmington, Del. (colored).....	62.8
33. Memphis, Tenn. (colored).....	75.8

"It is noteworthy that the city having the lowest per cent. of retardation is Medford, with 7.5 of her pupils in

that class. The colored pupils of Memphis show the highest percentage of retardation (75.8) and the figures are based on the enrolment in June. As was explained earlier in the chapter, figures taken in September will inevitably show a lower percentage of retardation than will similar data gathered in June. Therefore, it is nearly certain that if the data were gathered in all cases on the same basis there would not be so great a discrepancy between the two cities at the extremes of the table. On the other hand, it is entirely probable that if all the computations were made on the same basis Medford would still have the best record, and the colored pupils of Memphis the worst.

"This table is instructive in disclosing how important a matter retardation is in all the cities from which data are available. On the average, approximately one-third of all the children in our city schools are above the normal age for their grades,—they are retarded. The table is further instructive in showing what a wide variation there is in conditions. In the cities making the best showing the number and percentage of retarded pupils are almost negligible. In the cities making the poorest showing the large majority of all the children are over age for their grades.

"One of the general conclusions based upon the figures gathered for the whole country is the following:

"There is a high variability between cities in respect to the proportion of over-age children. Among the thirty-one cities studied, Medford, Massa-
Ayres' Summary
chusetts, makes the best showing with 7.5 per cent. of the pupils in the above normal age class.

"The colored pupils of Memphis make the poorest showing with 75.8 per cent. above normal age. In the thirty-one cities taken as a whole, 33.7 per cent. of the children,

or a trifle more than one-third, are above normal age for their grades. These figures probably represent with fair accuracy average conditions in city school systems of this country." ⁵

The Latest Summary.—A still later summary places the percentage somewhat higher. "A study of the records of 206,495 school children," says the same writer, "in twenty-nine cities shows that 37 per cent. of them are above the normal ages for their grades, 13 per cent. of these cases being caused by late entrance, 17 per cent. by slow progress, and the remaining 7 per cent. by both causes combined." ⁶

From the foregoing figures an increasing conception of the enormity of the problem may be gained. Of the 17,061,962 public school pupils reported by the Commissioner of Education, 33.7 per cent., or a little more than one-third, will probably leave school at the legal limit of age without completing their common-school education. An army of the same total with 5,740,881 stragglers, or any army with a like proportion of stragglers, would be a perilous foundation upon which to base the hopes of a state for stability and continued prosperity. In democratic America the school children of to-day will form the foundation of our republic of to-morrow, and one of the largest if not the largest stone in the foundation of any republic is the intelligence of its citizens.

Statistics of the Feeble-minded.—Important as is the function of the clinic in the treatment of children retarded through curable physical defects, it is yet minor to the less

⁵ Laggards in Our Schools, Leonard P. Ayres, N. Y. Charities Pub. Com., pp. 45, 46, 48.

⁶ The Relative Responsibility of School and Society for the Over-Age Child, Leonard P. Ayres, *Journal of Education*, Dec. 21, 1911.



No further tests should be necessary to show that this child is suffering from myopia.



Adenoid case. A four-months-old baby from which adenoids were removed.



Profile and side view of adenoid case.



A typical adenoid case.

extensive though more intensive need of exact and careful diagnosis of mental deficiency. Though they are less prevalent than backwardness from curable physical defects, imbecility and idiocy are present to an almost astounding degree in America. A sinister indication of their real extent is given in the Commissioner of Education's Report for 1909 in the statistics for state and private institutions, from which the following paragraph is taken:

"Tables 185, 186, and 187 summarize the statistics of the 26 state schools and the 17 private schools for the feeble-minded. The state institutions had 17,549 inmates, only 10,679 being reported in a ^{In America} school or kindergarten. The 17 private institutions had 927 inmates, the number in school or kindergarten being 424. Tables 188 and 189 give in detail the statistics of public and private schools for the feeble-minded."⁷

These figures, bad as they are, do not nearly express the real state of affairs as estimated by experts. Though all of the state institutions are crowded and each has a long waiting list of applicants, there remain thousands of unknown and uncounted mental defectives at large who ought to be segregated and sequestered in proper colonies.

The Number of Mental Defectives in Public Schools.

—Wherever attempts have been made to count and to aid this class, the investigators have been surprised at the number. In the Baltimore, Md., schools a provision for epileptics alone revealed a surprising number of them in classes. The Superintendent says, "Even after the compulsory attendance law went into operation we

⁷ The report for 1910 is not so full. Only 25 states and 16 private institutions are reported, the former with 16,678 and the latter with 892 inmates.—Report of the Commission of Education for year ended June 30, 1910, vol. ii, pp. 21-25.

excluded the worst cases; but we are surprised to find in the spring of 1907, on taking a census of these children, that we had 83 of them in school. Almost wholly as a protective measure, and in the interests of normal children, it was decided to try experimentally their separation from other children. There special classes were authorized by the Board and two were organized early last fall."

Plans recently put into operation in St. Louis for training the distinctly imbecilic and idiotic children show the same prevalence of feeble-mindedness and necessity of large expenditure to deal with it. "In November, 1907, Superintendent Soldan reported to the Board of Education that there were at that time in the various public schools of the city 181 children so *mentally defective* as to be incapable of doing their regular school work provided for normal children. They were not merely slow or backward children. They were unable to do either the amount or kind of work which even a slow child can do; yet these children were considered capable of education with educational facilities adjusted to their needs, and with constant supervision of their physical condition. Nine children cited by Superintendent Soldan as typical of the entire list ranged from nine to fourteen and a half years of age. They had attended school from three to six years. Four had not advanced beyond the first grade; and only two had advanced beyond the second.

"'Nature,' says the report, 'puts the defective child in a class by himself and Education should take Nature's hint.' It was recommended that twelve school rooms be selected and equipped, not as makeshifts, but in the best possible manner, with a view to meeting a permanent demand.

"To meet the present needs of the city of St. Louis for the education of defective children, the Board ordered that three houses be provided and they appropriated \$12,000 to cover the expense of the special schools for the remainder of the present school year. A later report shows that three special centres of two classes each, organized on the above-described plan, are now in operation and that each centre has a waiting list of applicants for admission."

The Number of Feeble-minded in the Total Population.—Besides these investigations in Baltimore and St. Louis, Dr. Walter S. Cornell⁸ has made a study of thirteen schools in Philadelphia, and with his results also gives facts and estimates made by others as summed up below.

"Backward and Feeble-minded Children.—Bearing in mind that the term *backward* children in the definition here adopted refers to those whose poor intellect is associated with suspicious signs of general mental defect, it is seen at once that this class of children is affiliated more closely with the *feeble-minded* than with the *dull* group. As these children are on the borderland between normality above and abnormality below, many assigned to the group of backward children by one examiner may be designated as *feeble-minded* by another. To a certain extent it is a compromise class for debatable cases. Many children exist, however, who correspond clearly to the idea expressed in the definition. They are *tainted* children.

"Since the diagnosis of these cases rests more on the psychical than on the physical grounds, and the theoretical

⁸ Mentally Defective Children in the Public Schools, Walter S. Cornell, *Psychological Clinic*, vol. ii, No. 3, May 15, 1908, pp. 81, 82, 83.

limits of the class vary slightly with each examiner, the number of backward children in the schools is difficult to determine. Furthermore, the predisposing influences of race and social condition combine to produce a larger proportion of mental defectives in some communities than in others, and this fact makes the value of statistical studies, based on official reports, rather uncertain.

"The following sources of information on the proportion of truly backward and feeble-minded children are as trustworthy as any:

"1. The working rule adopted by those officially interested, that one of every five hundred of the *entire population* is of feeble mind. A fair proportion of these find their way into the public schools.

"2. A report of a London Commission several years ago, stating that one per cent. of the *school population* is mentally defective. I have often seen this statement, but have not been able to ascertain its trustworthiness.

"3. A very painstaking study by Miss Dendy, of Manchester, England,⁹ in which expert examination of 44,000 children showed 280 (over one-half per cent. in the schools) to be of feeble mind. An equal number of children nomi-

⁹Of 100,322 children in the public elementary schools of Manchester, in 1898, 44,463 were under the direction of the School Board, and were inspected to ascertain the proportion of those who were mentally defective. The accuracy of these figures is undoubted, since the case reports were all passed upon by Dr. George Shuttleworth, and the children were all personally examined by Dr. Ashby, a leading Manchester physician. Five hundred and twenty-five children with suspected mental defect were noted by the teachers and by Miss Dendy and 500 of these were examined by Dr. Ashby. Of these latter "214 were dull and backward, 276 were mentally feeble, 4 were deaf mutes and 5 did not appear sufficiently behind to come under any of these terms." (From Report of Conference of Women Workers, Edinburgh, 1902, p. 116, paper read by Miss Dendy, of Manchester, England.)

nated for examination by the teachers were diagnosed by the examiners as simply dull or backward.

"4. The existence in New York City of 41 special, ungraded classes for truly backward children, containing 731 children officially committed to these classes by a medical examiner. These children do not represent all the pupils of the New York schools, as the report from which these figures are taken (New York City Superintendent's Report, 1908, page 628) covers only six months' work of the medical examiner in 69 schools. To utilize these figures we may assume these schools to be the large ones in the proper districts, averaging 1200 enrolment, which would result in a percentage of 0.9. The backward children contain among their number an appreciable proportion of feeble-minded.

"5. The examination by the writer of 63 truly backward and 12 feeble-minded children in thirteen Philadelphia public schools of 10,000 enrolment. As all of the pupils in eight of these schools were not systematically examined by me, and as the cases were referred to me by teachers, the number of backward children is certainly too small. It should be nearer 80, which would give a percentage of 0.9. The 12 feeble-minded children doubtless represent all of this class, so that the proportion in this case would be 0.1 per cent. of the school population.

"In view of these facts, it may be asserted with fair accuracy that ten per cent. of the public school children are dull, often from removable causes, 0.5 per cent. to 1 per cent. are truly backward, and 0.1 per cent. actually feeble-minded."

With these figures later investigations are somewhat at variance. Bulletin No. 14, date 1911, of the United States Bureau of Education roughly estimates the number of

"feeble-minded children" in the public schools at 4 per cent. of the total attendance. It subdivides this 4 per cent. into two groups. "The lower one includes about one-half of 1 per cent. of the entire school membership They are generally mentally deficient They are institution cases, and should be removed to institutions.

"Ranking just above these are the remaining 3.5 per cent. who are feeble-minded but who can be given a certain amount of training in special classes in the public schools."¹⁰

English Statistics on the Feeble-minded.—Enormous as the figures turn out to be when applied to the total population of America, they are still conservative when compared with the Royal Commission reports of 1904, of the British Isles. These statistics and the manner in which they were gathered and compiled are summarized below from the latest work on amentia by Dr. Tregold.

"In this country, however, an enumeration has recently been made on quite another basis. In the year 1904 a Royal Commission was appointed to consider the existing methods of dealing with these persons, and the Commissioners decided that, before any practical scheme of administration could be formulated, it was imperative that they should obtain approximately accurate information as to the number and condition of the class. With this object, a series of personal investigations were instituted on a considerable scale, and this is the first systematic attempt which has been made to obtain reliable data. It is not too much to say that these inquiries have added enormously to our knowledge regarding the condition,

¹⁰ United States Bureau of Education, Bulletin, 1911, No. 14; Whole Number 461.

manner of living, and environment of the aments of this country, besides making it possible to calculate their total number with a degree of accuracy hitherto unattainable.

"The method adopted by the Royal Commission consisted of a series of elaborate and searching inquiries by a number of medical men, to each of whom a selected area was assigned. The investigator was instructed to visit personally all public elementary schools, poor-law institutions, charitable establishments, training-homes, reformatories, common lodging-houses, prisons, idiot asylums, hospitals, and, indeed, any establishment likely to harbour the mentally abnormal. Further, he was to see persons in receipt of out-door relief, to apply to the clergy, medical practitioners, the police, charity organization societies, and similar agencies, and, in short, to make use of any and every channel which might help him to make the enumeration complete.

"It was not found practicable to investigate the whole of the country in this way, but, in order that conclusions applicable to the entire country might be drawn, a selection of certain typical areas was made. Altogether, there were examined nine areas in England, two in Wales, one in Scotland, and four in Ireland, having an aggregate population of 3,873,151."

It will be seen from this table that, while the mean average incidence of total amentia in the sixteen areas is 3.28 per 1000 population, the variation ranges from a minimum of 1.1 in the case of Cork to a maximum of 4.68 in the case of Lincolnshire.¹¹

¹¹ Mental Deficiency, A. F. Tredgold, 1908, pp. 4, 5, 6. See also Report of Royal Commission on the Care and Control of the Feeble-minded, London, 1908, vol. viii, and Feeble-mindedness in Children of School-age, C. P. Lapage, Manchester, 1911.

A Summary of American Conditions.—If this estimate holds at all for the United States—and there are reasons for thinking that it may be high for this country—it would bring the total number of mentally defective persons up to something like 295,000 in a population of 90,000,000.

On the other hand, according to the more conservative estimates, 100,000 to 180,000 defectives with irremediable nervous lesions, rendering them unfit for social life and propagation of their kind, live in the United States to-day. Of this vast number, an estimated 10 per cent. are in public and private institutions; the other 90 per cent. are pursuing their unrestricted way, some at home, some at work, some as idlers, tramps, loafers, or criminals, and some at school clogging and diverting its energies from proper channels in a vain attempt to teach the uneducable unteachable things. How many of the total number are being deprived of any training whatever, and who roam the streets at will, no one knows. Certain it is that every hamlet, every village, every town and every large city in an increasing proportion has its quota of children designated as "foolish," "silly," "not all there," "lacking in the upper story," or "queer." Heretofore these unfortunate ones, thought to be objects of special visitations by Providence, and unable to succeed in the public schools by the traditional methods of education, have been accepted as burdens by their parents or by the community, and no special effort made or even thought of for the alleviation of their condition. In this wide and unfortunately widening field of mentally deficient cases, the Psychological Clinic finds its special and unique function. It not only arouses the public to interest, but instructs popular opinion, and by opening wide the door of oppor-

tunity, permits and compels the guardians of such children to take the proper means of bringing them up to the full capacity of which they are capable. In almost every case this is at least to the point of self-support in the right environment, and assuredly in every case the saving of the individual child and many other members of society from untold suffering.

Out of such public agitation and education must eventually grow the larger development of legislation which will not only expand itself in housing, feeding, and training imbeciles, but will see to it that the community protects itself from itself by careful segregation and prohibition of marriage among those known to be subnormal.

The Psychological Clinic, then, like its medical cognates, is a sociological institution, definite in its entity and purpose, but wide-ranged in its relations to other organizations. Its whole range of affiliations will be more fully treated in a later chapter. Its constitution or organization will next be taken up, and will give a clearer conception of its nature.

IV.

OPERATION OF THE CLINIC

THE operation of a psychological clinic is far more complex than the uninitiated would suspect. In the preceding chapters the reader has already gained some notion of this complexity. In this chapter the general procedure will be outlined with the purpose of giving the reader a bird's-eye view of the whole operation, to be treated more in detail in later chapters. Maintaining, for the sake of clearness, our emphasis upon diagnosis, we will inspect what the clinic does from that point of view.

About this central purpose all the subsidiary and dependent operations can be grouped. For, though the clinic may be interested in the administration of medical and surgical treatment, may directly enter into almost all phases of social work, may supervise intellectual, physical and moral training, and perform the office of guardian, friend, and foster-parent, it assumes all these functions as preliminaries or as necessary consequences of mental classification.

The Time Necessary for an Examination.—The hours of the clinic are made known to the public as widely as possible. The sessions are held daily in the afternoon, from two to five, except Saturdays, when the hours are from nine to eleven in the morning to suit the convenience of school children. All come by previous appointment, and at least one hour is reserved for each examination. This is frequently found to be too short and several subsequent visits must be made by the child before the examination can be completed and full records secured. To give

the requisite information, the father, mother, or some other person fully acquainted with the family-history, birth, and life-history of the child must accompany him.

The Reception of Cases.—To the popular mind there is something repugnant about any clinic. An examination at which the secret disposition of the soul will be revealed is still endued to ignorant minds, and even to some who in general are far removed from superstition, with a trace of that awe anciently attaching to charms, spells, or incantations. The modern psychologist is supposed, like the tribal medicine man or mediæval sorcerer, to possess some esoteric power, some necromancy by which he can divine the condition of the mind.

Under these circumstances, both parent and child are in a more or less disturbed state of mind,—a condition which peculiarly frustrates the purpose of examination. The parents are likely to be confused and the child is excited, whereas he should be tested under the closest possible approximation to his habitual temper and disposition.

The first duty of the clinician is to overcome this state of tension. At this point the social worker can be of invaluable service. Her first pleasant greeting of the visitors, with some natural and easy remark, will go far to cure their stage-fright and put them into a fit mood for the psychologist. If the first good impression is followed up by a tactful method of questioning all the information required in ordinary cases may be obtained without any great difficulty from more or less unwilling, forgetful, and ignorant parents. Of course when they are extremely ignorant, or unable to speak the English language, the elicitation of sufficient trustworthy information about even the simplest facts of life becomes

The Reception
of the
Case

difficult. In no case, however, is a blunt and belligerent manner justifiable on the part of the examiner, though it might be mistakenly assumed on the ground that the examination is a scientific one and therefore a plain, simple and direct search for the truth. A scientist in this branch of investigation has every reason for not omitting the amenities calculated to subdue embarrassment. He is here confronted with the task of eliciting vital information from a nervous organism which is ready to react to the slightest shock; a personality, in short, that will respond most favorably to gentleness, but close up like a sensitive plant when roughly handled. The astute scientist therefore will proceed to obtain his desired information with as careful a method and with as much courtesy as if he were dealing (as indeed he is) with Nature herself in one of her most taciturn moods.

That such qualities are demanded of the clinician should surprise no one. The parents are laying bare the tenderest secrets of their hearts, their hidden fears and unexpressed hopes. They are thinking of the people of their neighborhood, what they will suspect and what they will say, and especially upon the possible stigma placed upon their child by this examination. Such considerations often cause parents to postpone a long time their visit to a specialist, and they finally do come only when circumstances like backwardness in school bring a note of suspension from the teacher, or when the increasing age of the child is accompanied with an increase rather than a decrease in the symptoms of the malady.

How to Handle the Child to be Examined.—The child himself often has a bewildered dread of what is to happen, sharing sympathetically his elders' fears in spite of their assurances of his entire safety, and frequently

suffering from the nervous shock commonly produced in mentally defective children by any change in their surroundings. These children are always nervous. Occasionally they come in crying, wringing their hands and beseeching the "doctor" not to hurt them. Sometimes, instead of fearfulness, stubbornness develops and a negativism that defies all parental admonitions and all the examiner's cajoleries. His first task, therefore, is to place himself immediately *en rapport* with all his visitors, to set them at ease, to radiate a careless geniality under which is concealed a carefully prearranged plan of campaign and assault by well-chosen questions. He will be alert to soothe any signs of fear or irritation on the part of the parents, to forestall any incipient stubbornness on the part of the child, or to follow up any faintest clue to a possible cause of deficiency—hereditary, intra-uterine, or developmental—which the parent may be intentionally or ignorantly concealing.

The Number of Persons Present at the Examination.

—For these reasons also it is highly necessary to limit the number of people in the examining room to those directly interested in the work. Sightseers and the merely curious should be rigidly excluded. Students are admissible as assistants only, never as mere spectators, or with note-books. During the examination the doors of the room should be closed and no one admitted except when absolutely necessary. An intrusion will sometimes interrupt a sequence of carefully planned questioning or destroy an interested attentiveness that has been obtained with great difficulty and when once lost is not to be regained because of the fatigue or excitement of the easily affected child. For the same reasons the furnishings of the room should be as simple as possible.

In cases of mental deviation, and especially with a small child, it is permissible to examine it in the presence of the parents, but often advisable to make at least a part of the examination with the child alone. In cases of moral deviation the latter method is always necessary, as the accused child will almost never tell his side of the story freely and with full detail in the presence of his parents or teacher or probation officer. All of them have their minds partially or fully made up about him, for it is one of the most fatuous delusions of adults to believe that they can easily divine the thoughts and purposes of their charges in matters which concern the most unfathomable mysteries of the human heart. Their presence, therefore, even when their convictions are expressed in no other way than by silent approval or disapproval conveyed by looks, attitude, and all the other minute signs of feeling to which the subject is keenly sensitive, will act as an effectual deterrent to any free statements from the child.

To this may be added another reason why moral cases should be examined alone. There is always the possibility that a modicum of self-respect may remain to the bad boy. He therefore may wish to maintain his reputation for honesty and uprightness in the eyes of strangers who he may assume know nothing of his past. If, however, his case is fully described to the psychologist in his presence, the last vestige of hope of reform from this one source is gone. Oftentimes this means much when the psychologist is to become his adviser, possibly his friend, for several months. Under these circumstances it is advisable for the examiner not only to let the child tell his own story, but also to conceal from the child the extent of his knowledge derived from other sources. It is well to accept the

boy's own account, and reserve other information in order to check up his statements concerning himself and to be forearmed against any surprises. If it is desired at any time to secure a full confession from a boy, this should never be done with the intention of humiliating him, and should never result in embittering him. It should be made with an idea that the slate is to be wiped clean and a new start made.

Four Examinations of Each Child Made.—For the purpose of covering all details, the Psychological Clinic at the University of Pennsylvania makes use of four examinations and four reports for each case. The first is called the general or oral examination; the second, the physical; the third, the mental, and the fourth, the social. Each report is made up in the same general style, type-written, with its appropriate title in the middle of the first line, the name of the examiner underneath; the name of the child, his address and age, the date, and a case number at the top.

The Oral Examination.—The general examination is made first and begins immediately after the child and his parents or accompanying friends have entered the examination room. It allows for their possible confusion under the ordeal by reversing the ordinary chronological order and by beginning with the present and working back into the past. While the details of family history and birth are extremely valuable, yet both are so delicate and so far removed from the present situation, and to the popular mind have so little connection with mental troubles, that the informer would be unwilling to give them freely and with the accuracy required, even if he could remember them. The questions, therefore, begin with the present and with the perfectly obvious and

natural request for name and address and the reason why the child was brought to the clinic. They proceed, leading always away from the present, through a pedagogical history and statement of physical diseases, then gradually back to babyhood and birth, and finally out into the family history, which is the most difficult field in which to secure accurate information and yet one of the most important. For statistics indicate that at least sixty-six per cent. of idiocy is hereditary, traceable to epilepsy, insanity, imbecility or other neuroses in the father or mother or grandparents, while about thirty per cent. is caused by post-natal injuries and diseases, and about three per cent. by natal accidents or injuries. The questions themselves will be studied more fully in the next chapter.

The Physical Examination.—Immediately following the general examination, including the pedagogical and life histories of the child, comes the physical examination. It is performed by a regular physician who volunteers his services for this work, but it is in no sense a complete medical diagnosis. Its purpose and place in mental diagnosis will be made clearer later on. At present a few general remarks about its character will suffice. It is extensive rather than intensive; that is to say, no special symptoms or symptom-complexes are looked for to the exclusion of others.

The examination begins with anthropometric measurements, and proceeds methodically to note every physical defect, whether immediately or remotely connected with mental deficiencies. The results of the examination are tabulated according to a set form.

The physical examination is usually made in a room separate from the regular clinic room. It is best usually,



Making head measurements in a mental examination. The shape of the skull is often important.

to have as few persons as possible, it being necessary to remove much or all of the child's clothing in order to make the examination. The parents or others accompanying the child should be present only in exceptional cases. The physician, because of his professional standing, can secure admissions of moral lapses where no one else can. For the same reason, arrangements are made to have the girls examined by a medical woman and the boys by a medical man. Besides eliminating the natural embarrassment which would defeat much of the purpose of the clinic, the examiner must also take care not to frighten the nervous child to such an extent that he will not submit to later clinical examinations for the removal of physical defects found in this preliminary examination.

The Mental Examination Proper.—After the physical examination comes the mental examination proper. It must be remembered that the whole procedure is in a sense a mental test; that all the previous inquiries and explorations into the family history, the pedagogical career, the anatomy and physiology of the subject, have been made with a psychological motive. These underlying reasons and the ends which they serve will appear more clearly in a later place.

By General Observation.—The mental tests begin with the examiner's first sight of the child, of his general reaction to the new environment, his coördination exhibited in standing, walking, sitting, taking off his coat and hat; his words, sentences, articulation, sense, reason, general knowledge and mental grasp, as exhibited in talking, his attention to articles in the room, his apathy, indifference, dulness, stupidity, excitability, alertness, irritability, his attitude toward mother or father, every movement he makes, every fitting expression on his face,

—all are caught by the trained observer and rapidly built up into a picture to be compared with the other clinical pictures already in his mind. Such skill comes only by practice; no tests can ever satisfactorily take its place.

Reference has already been made to the alertness of the examiner to forestall either stubbornness or undue excitement. To this ability he must further constantly add an accurate judgment of the conditions which now tend to affect the child. He must make allowance for fatigue, excitement of affected nerves, and all the other influences that are working in the defective mind of the child under the new circumstances. The nicety of this allowance is a large factor in the final determination of the child's mentality, and sometimes, in the case of borderland children, is absolutely decisive in placing the child in one class or another.

In this mental examination by general observation the mother (or other relative) of the child must be included. The relations existing between her and her offspring, as shown by a child's attitude toward the mother, are of high importance. One of the almost immediate signs of feeble-mindedness on the part of the child is his constant turning to the parent for a cue whenever a question is put to him. The answering attitude of the mother will immediately indicate her unexpressed and perhaps unconscious estimate of the child. Upon these peculiar, yet almost unnoticeable indications hinges much of the classification.

Besides these furtive and flitting indicatory expressions, the mother herself presents an object of interesting observation to the examiner. The clothing she wears, her deportment, manners, and general behavior, all tell some-

thing of her social station, and consequently something of the surroundings of the child. In her deportment she will exhibit signs of her own mentality, oftentimes revealing a high-strung nervous temperament or an apathetic dulness closely allied to the condition of her child.

Sometimes, indeed, the mother is patently feeble-minded herself, but to say such a thing, or to even hint such a thing, would immediately bring on a storm of indignation. Oftentimes, however, such a mother can be led to talk of her own ills and thus unintentionally reveal some information which connects her neurotic tendencies by heredity with the imbecility of the child. All that has been said about the mother can be said equally about the father if he be present, and to a lesser degree about the relatives who may come. It is well, therefore, to secure the attendance at the clinic of as many of the family as possible.

It might be remarked in passing, that one of the chief difficulties in dealing with mentally defective cases is found in the parents themselves. They are almost always ignorant or inefficient. The inefficient are either weak or over-hard in their discipline of the child. To secure a sane and sensible treatment with a modicum of the discipline necessary with all mental defectives, and yet to restrain the impatience,—sometimes the passion,—of the parent in the administration of discipline, is an exceedingly difficult problem, so difficult that one of the fundamental principles of training such children is to remove them first from the immediate supervision of their parents.

Along these general observations, statements concerning the play of the child, his ordinary likes and dislikes, his general behavior, especially in the company of other

children, are of prime importance. If he plays regularly and persistently with children younger than himself, it is an almost conclusive sign of mental feebleness, and the age of the children with whom he plays, to some extent at least, will mark the degree of his deficiency. The kind of play that he likes is also significant. If a boy spends his time playing with tools, endeavoring to make wagons or kites, or other toys, but has no inclination for books, and is unable to learn to read, he exhibits the signs of one class of imbeciles. If his parents, after confessing their child's inability to study properly and to advance in school, at the same time express their pleased amazement at his wonderful musical ability, his talent for quickly catching and carrying a tune or popular air, another sign of imbecility will appear to the expert examiner. If, added to this, he likewise boasts of a good memory for odds and ends without logical connection, the conclusion is almost inevitable that feeble-mindedness is present.

Particular Mental Tests.—To this method, by general observation of every-day and ordinary expressions of conduct, the examination by mental tests must be added. This matter will be taken up in detail in the next chapter. A cursory glance will, however, be given here at the general method and kinds of tests used.

This part of the examination comprises a series of questions and tests concerning the child's temperament and mentality. Spelling words and problems and reading selections corresponding to the various school grades are used. This gives an easy and accurate standard for measuring the child's present pedagogical status, as well as the extent of his retardation. Tests in reading are given in selections from the regular school readers for each grade, upon the same paper and in the same print commonly

used in the public schools. The form-board test for ideation processes, the color tests for perception, selection tests for memory span, tests for association between auditory and visual stimuli, coördination tests, and in the case of necessity all the finer laboratory tests for reaction time and association time are given.

Simple Tests.—The best and simplest tests are the ones most like the natural reaction of the child toward common objects. Instead, however, of trusting him to react spontaneously or accidentally, several typical objects are used to prompt his reactions. For example, as coördination can be tested by throwing a ball, by placing pegs in a peg-board, by replacing blocks in a form-board, or the handling of certain kinds of toys, the accuracy of his perceptions may be tested with simple colored blocks, colored yarns and other objects. With the same materials the memory span may be also measured accurately enough for ordinary clinical work. For instance, three or four blocks of different colors may be held in the examiner's hand before the eyes of the child for an instant and then put out of sight. Then the child is required to choose the same blocks from a neighboring pile. The number of the blocks may be varied from experiment to experiment, until the number becomes too large for the child to grasp in one instant. Usually this number is four or five. With some little ingenuity and comparatively few toys the expert examiner can develop an almost endless variety of tests for mentality; and since the real test of anyone's mentality is his reaction under normal conditions and the nearest approach to normal conditions is the play life of the child, these tests are not exceeded in value by any others for giving a general estimate of a child's mental capacity.

Laboratory Tests.—If by this time sufficient causes for backwardness have not been revealed, further and more accurate tests are made with the apparatus in the laboratory. For example, the excitability of his nervous system may be tested by the length of the patellar reflex kick or of the reaction time; his blood pressure may be taken; the reaction of his vasomotor system to certain mental conditions may be accurately measured by the plethysmograph or the algometer; audiometer and ergometer tests may be made. These indicate the present physical and mental condition of the child, his power to react quickly and accurately to new stimuli and, in the case of repetition, his power to adjust himself to a new environment and learn by that repetition. By this time a very fair estimate of the condition of the child can be made.¹

The Social Examination and Report.—At the end of the examination the child is again handed over to the social worker, who makes arrangements for visits to other clinics, or to physicians and specialists who will diagnose physical defects, perform surgical operations, or administer medical treatment. Sometimes the social worker will follow the child into a home and there supervise the administration of medical treatment under the advice of the physician. Oftentimes, too, her personal influence over a recalcitrant child may smooth out a great many difficulties. Exactly what she does and how she does it are more accurately set forth in a number of concrete illustrations scattered through this book.

Her work in the home naturally leads to the second portion of her duties, *i.e.*, the making of reports upon

¹ For a complete account of various tests for mental capacity see "Manual of Mental and Physical Tests," by Guy Montrose Whipple. Warwick & York, Baltimore, 1910, p. 534.



A child being tested for individual capacities. Some of this apparatus is like that used by Madame Montessori.

those phases of home life or environment which affect mentality and may assist in the classification of the case.

Eventually she is the one who assists the parents in securing admission to the proper institutions for the permanent training of mentally defective children. The parents themselves are often lamentably ignorant of how to proceed to secure relief for their afflicted child and when the way is pointed out to them often need the constant inspiration and prodding of some one who is familiar with the details, and who understands the importance of the project. They require an immense amount of sympathy, of patience and tactful management in order to do their duty by their children and by society.

The work of securing admission to institutions for children necessarily involves a wide and thorough study of all public and private institutions for such children. The social worker's duties include the constant securing of information through circulars, catalogues, and reports of such organizations, for future reference. On the other hand, since many children come from charitable organizations and are returned to charitable organizations, it is necessary for her also to be aware of the number, organization, location, purpose and methods of such societies. In these few suggestive words, some idea of the great possibilities and the large field of the social worker in connection with the psychological clinic are indicated, although much must be left to the imagination of the reader.

The Work of the Recorder.—This chapter would not be complete without mention of the recorder who is present at every examination, and who takes all the notes concerning each case. She must be a stenographer of ability and at the same time possess the personality and tact demanded of every one who undertakes any part of

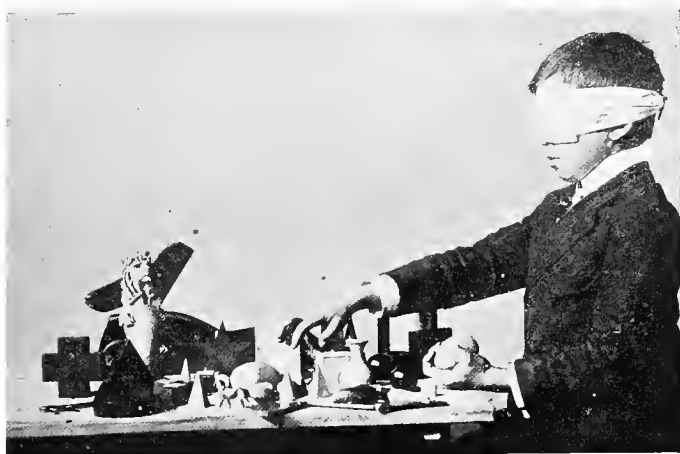
this work. It is impossible for the examiner to ask a question and dictate the answer to the recorder. She must be able by experience to learn what portions of the answer are essential and what portions are trivial and of no value to the classification. While she must always be present, she must never be in evidence; for nothing will interfere with the free exploitation of the case like the sight of someone taking notes of everything thus answered. In many examinations it is necessary to stop and explain to the suspicious visitor that the notes taken are for the perusal of the examining psychologist and are not to be made public.

When the notes are taken and typewritten, it falls to the recorder to file them in the proper filing cases for future reference. For this purpose, possibly the best method is to write the notes upon paper of the ordinary size, 8 x 10½, with marginal headings for easy reference, to file them with all other material pertaining to the case in an ordinary manilla folder, upon the edge of which are placed the number of the case, the name of the child, and the date of examination. Such a method permits of ready reference and almost unlimited expansion.

We have now followed the child through the various operations of a clinical examination and given some hint of subsequent medical treatment and pedagogical training. The space here devoted to the discussion of training is in no wise commensurate with the vast practical importance of such work. In the one function of classification the clinic is supreme, and there it finds its particular and peculiar field. It is an open door of opportunity for every parent, guardian or teacher on whom the responsibility of a backward child devolves to have a mental classification quickly and certainly made. The importance of an



A steadiness test. The child must hit the centre of a target with a metal point. If he does hit it an electric bell rings. The targets decrease in size.



A test of a child's ability to form a picture of, or to recognize a shape by touch.

early classification, with the consequent advice concerning training, has been amply emphasized in the preceding pages.

The psychological clinic, while performing this necessary and peculiar service to the community, still in no way seeks to usurp the functions of any other social service organization, or in any way to encroach upon fields already occupied.

V.

THE CLASSIFICATION OF CLINIC CASES

THE preceding chapter has made it manifest in what sense the central operation of the Psychological Clinic is mental classification. To make as clear as possible what is meant by classification is the business of this chapter; and no mean nor light task it is. For, of all the comparatively simple and objective operations of mental therapeutics, this one of classification has shrouded itself in a singular penumbra of confused definitions and cross classifications, so that the most skilful diagnosticians and the most expert writers on the subject are not agreed upon the meaning and implications of this process so fundamental to the whole problem of backwardness, mental deficiency and moral delinquency.

How Confusion among Proposed Systems of Classification Affects the Children Classified.—Fortunately, the results of this confusion concerning definition are confined chiefly to academic discussion and do not affect the personal feelings of the subject classified, who is usually about as indifferent to the artificial classification imposed upon him as the average normal man is indifferent to the estimate of his essential worth imposed upon him by accidents of birth or fortune. Only occasionally does a feeble-minded person arise to the comprehension of the meaning attached to his gradation and partially to resent it as did one imbecile who bribed an attendant at an exhibition to remove a card from his piece of manual work and substitute another card crediting him, not with

normal mentality,—which, to him, would possess no distinction,—but with imbecility one grade higher!

Beyond his own personal estimate of himself, however, the subject may be materially affected by the judgment emanating from experts. Their decisions as to his mental capacity under the traditions and popular usages grown up about such ancient phenomena as mental aberrations in all forms will inevitably have some effect upon the deliberate treatment accorded to the child by his guardians and upon the unreflective attitude of society toward him. These effects will be more clearly elucidated further on. Just now we are concerned with clarifying the notion of classification and what is involved in it.

The Twofold Aspect of Mental Diagnosis.—We can simplify our problem much by remembering that all diagnoses comprise two parts: first, the process of recognizing a disease from its symptoms and deciding as to its character, and second, the result of that decision. The result of a mental diagnosis is the assignment of the subject to a class. Hence, mental classification appears to be a more appropriate term than diagnosis, though the latter is so widely used as to make a change inadvisable. The process might be called a mental analysis, though the matter of names is of secondary importance if we keep clearly before our minds these two questions: What are we seeking in mental diagnosis? and, How do we seek it? The answer to the first is: To place the subject in a class already decided upon, and to the second: By discovering some mark or sign which will decide to what class he belongs. To do this properly requires first to devise a scheme of classification and then to determine the method of assigning any particular subject to his class. The latter process will be fully treated in a later chapter. Just now

we will occupy ourselves with the scheme of classification. It ought to be kept in mind always that no classifications appear in nature; that all individuals differ from others, and yet each individual is like others. In classifying individuals we are dividing them into groups which represent types, and the individuals assigned to these groups all differ more or less from the average or typical of the group. Classifications are made for convenience; for the sake of easily dealing with large numbers of individuals by reducing them, in a sense, to a fewer number in which the class stands for the unit.

The First Step Toward Classification.—First of all, it is to be noted that those who come to the clinic are already partially classified. Something in their character or conduct has led those who have them in charge to select them out, and to bring them for a further and more scientific examination. The reasons of their selection are manifold. All can be summed up under the two heads of “mental deviation” and “moral deviation.” We adopt the term “deviation” here because it is the broadest and most inclusive one that can be applied to those who come to the clinic. It denotes a great class, but connotes one attribute only, viz., that of difference or diversity. The child who is brought is not normal, or usual, or typical. That means, in general, that he is different from others and may be different in many ways. He may be abnormal, subnormal, retarded or advanced, physically or mentally defective, deliberately bad, or a victim of bad environment, or a host of other alternatives,—in short, anything that deviates from the mental norm.

The Principle of Classifying Deviates.—Waiving, for the time being, the difficulties attached to the definition of normal, which we can fairly do because the mere fact

that a child is brought to the clinic argues that it has deviated more or less from the vague standard of normality existing in the community from which it comes, we will turn again to search for some practical and, as far as possible, definite, clear and universal principle of classification of these cases. That is our first step in a clinic-classification after the child has arrived at the examination room and after he has already been classified by society as a deviate. Of course a few normal children are brought through mistaken or over-anxious parents, but they are not properly clinic cases.

Curable and Incurable Deviates.—A beginning can be made by answering the question on the lips of every visitor to the clinic, "Can my child be cured?" This inquiry every mental classification must meet, and the answer will immediately assign the child under examination to one or two great categories. He is either curable or he is not. All the cases of mental deviation, no matter what, nor how remote may be their causes, nor into what wilderness of complexity their symptoms may run, are either curable or incurable.

The reader must be immediately warned against accepting this classification as an all-embracing catalogue of all present and all possible children. It is not. First, it is primarily a mental and moral classification. That is, it considers the minds and the morals of the children when it places them in one category or the other. It attends only secondarily to hereditary, environmental, anatomical, physiological and pathological factors, no matter how large these items may loom in the actual examinations. They are and must be considered, but they are not here selected as the prime aspects or marks for classifying children.

A number of fuller classifications have been made from

different viewpoints and for special purposes. Dr. Bruner¹ mentions at least four viewpoints: the etiological, the anatomical, the symptomatological, and the psychological. Dr. Witmer² proposes a three-fold scheme based upon the possibility of instructing exceptional children in public schools. Dr. Groszmann³ has presented one of the most comprehensive schemes for classifying all children into normal, subnormal and abnormal groups chiefly by their social efficiency. Many others made by psychiatrists and medical writers on mental diseases might be quoted, but these mentioned are more directly connected with our field and are sufficient to illustrate our point.

Next, the classification is merely descriptive. As far as possible we have purposely excluded from it all reference to explanations or causes. To say that Johnny is "curably backward" does not necessarily or *a priori* attach his backwardness to any one cause or causes. It may be known from experience, even with scientific certainty, that certain physical conditions are associated always with incurable retardation. Such correlations in the future may increase or decrease in number, but this will in no wise affect the application of our principle. Granted that future developments may place much more emphasis than now upon the symptom-complexes, clinical pictures, and lack of particular mental capabilities, as decisive for naming varieties of mental diseases, still, not a future case will ever arise regarding which the fundamental question here proposed may not be asked and still retain its sig-

¹ Proceedings of the National Educational Association, 1909, Abnormal Children, Frank G. Bruner.

² Bureau of Education, Bulletin, 1911, No. 14, Whole No. 461, pp. 21, 22.

³ Report National Association for the Study and Education of Exceptional Children, 1911, pp. 6, 7.

nificance. Whatever may be the correlates, causes or occasions of any mental deviation presented, whether lodged in an uttermost ancestral taint or an immediate cerebral lesion, and however difficult in practice it may be to apply this principle, in theory at least it makes the problem of mental classification thoroughly definite.

Remember, too, it is a clinic-classification. It is born out of the needs of clinic-operation and shaped by the exigencies of practical service. It has its limitations. Since normal children are not usually brought to clinics it does not include "normality" as one of its categories. Since chiefly bad or backward children find their way to mental clinics our treatment of the subject emphasizes those classes, though they are not primary in the classification. Since the clinic is an ameliorative or curative institution, and the former function is necessary to the latter, we have stressed the prognosis of the cases and made it a fundamental principle of classification.

It must be remembered that we are not here endeavoring to frame a logical definition of mental deficiency in its genuses, species and varieties. Our task is to furnish such a clear and practical scheme of classification for those varieties of mental deviation met with in the ordinary course of practice in a psychological clinic that the children can be quickly classified for proper remedial or ameliorative measures. The salutary end of the clinic-operation must always be kept in the forefront. In the light of this end theoretical refinements may be waived in favor of workable definition and lucid classification.

Finally, many objections may remain against this mode of classifying clinic cases. At first sight, it seems to partake more of a logical necessity than a feasible and fertile characterization of real children. We can only reply

that it has already been used in our clinic practice and has been found to have a vital significance. Upon the curability or incurability of a case, as we shall see later, depend its medical, surgical, pedagogical treatments and its ultimate disposition in society. Further, so vital is this distinction that the majority of specialists on feeble-mindedness make this the essential mark of real amentia. Dr. Tredgold says ⁴ "The essence of mental defect is that it is incurable, and by no 'special' education, however elaborate, can a case of amentia be raised to the normal standard. Some defect must always remain, and upon this fact all authorities agree."

A Mental Diagnosis is Essentially a Prognosis.—It will be noted that the adoption of curability and incurability as bases for classification fixes at once the *nature* of the diagnosis. It is no longer a simple and comparatively easy observation of the present condition of a child and an immediate judgment based thereon concerning his present mental condition. Any common public school examination will tell what a child knows now. What the child now knows is an indication of its mentality, but not a final one. What it will learn or can know under certain conditions and with proper methods of training is the all-important and decisive question. Therefore, it may happen that of two children of the same age, one may show marked superiority in intellectual attainments as measured by public school standards and yet be judged an imbecile; while the other is considered normal. The unlearned child, either through neglect or on account of removable physical defects, has had no training, the other has. The classification predicts that the latter can learn only so much,

⁴ Mental Deficiency, A. F. Tredgold, p. 127.

will then reach his full mental capacity, and from that time remain stationary or recede from his best attainment. On the other hand, the capacity of the normal child is an unpredictable quantity or quality and its progress has no present assignable limits. This view of diagnosis agrees, too, with the general though little-thought-of truth that all children are born idiots, deaf, dumb and blind, and that in their growth they pass through all the stages of idiocy, imbecility and morosity to the normal. Binet, as we shall see later, bases his system of mental tests upon this fact and measures mental deficiency in terms of the normal child's progress at certain ages. With this view, too, Dr. Bruner, an educator, agrees perfectly when he says: "But no matter how elaborate and inclusive the mental analysis which a diagnostician may make, it is not how the mind habitually or overtly functions which must form the criterion as to a child's place in the intellectual scale, but his possibilities for improvement under training, and hence his future promise of social adaptability and service."⁵

What the Mental Clinician Must Measure.—A sharp distinction, therefore, must be made between the child's present attainments,—whether this concerns reading, arithmetic, writing, or playing,—and his mental capacity. It is the latter and not the former that is the essential quality to be measured by the examiner. But here again a further distinction must be carefully kept in mind. Some have been inclined to make determination of the present mental capacity of the child the sole quest of their search. Such a view is expressed by Binet in the following words: "It is intended that these diagnoses are of value

⁵ *Abnormal Children, Their Classification and Instruction*, Dr. F. G. Bruner, Proceedings of the National Education Association, Denver, Colo., July 3, 1909.

only for the present moment. He who is imbecile to-day can perhaps become feeble-minded as he grows older, or, on the contrary, remain an imbecile all his life. One cannot tell, the prognosis is reversed."⁶ Manifestly such a

The
Clinicist
Measures
Potentials

theory makes a diagnosis valuable only to the extent that the theory is untrue. If the statement above is to be taken literally the diagnosis is of no avail the next moment. Its value increases inversely to the truth of the theory. Such considerations, therefore, have led the majority of psychoclinicists to insist that the essential quality to be sought in a mental classification is not the child's mental attainments, nor his present mental capacity, but his present mental potentialities. What he is now indicates what he will be when his mental powers reach their fullest development. And what his mental powers are when he has reached his fullest development determines the class of mental deviates to which he is now to be assigned. Hence it must be seen immediately that the diagnosis and the prognosis are essentially blended.

Usually Clinic Children are Either Bad or Backward.—To take up again the thread of our diagnosis where we left off, let us say once more that all clinic cases are deviates, either mental or moral. Usually, however, the children brought to the clinic are either bad or backward. The consideration of moral delinquency will be reserved for a later chapter. At the present time we will take up the problem of backwardness, and, first, let us be clear about the meaning of the word, in order that we may escape the common fallacy of confusing the symptoms with the disease.

⁶ Le Developpement de l' intelligence, Binet et Simon, *L'Annee Psychologique*, vol. 14, p. 91.

What is Retardation?—To say that a child is “backward” or “retarded” should not allege or imply the existence of a physical or mental disease. It may, and nearly always does, imply some defect or some lack. But that is not always regrettable. Is it saddening to think that “Mary is not forward in company,” or that “Johnny is backward in swearing”? Backwardness in some kinds of sophistication is by no means an unmixed evil. In some physiological functions, too, like pubescence, for example, late maturity is, in the minds of many, beneficial to the individual rather than detrimental. Even in mental development, retardation is no more of an evil than precociousness. The former may lead to mere slowness of progress in life, while the latter may develop into insanity or extreme dulness. Some good traits may be so far advanced that they make trouble under certain conditions.

For example, a boy six years old was brought to the clinic by his mother and sister, aged about 22. The boy lived at home with his sister, his mother and his father, the latter two being in middle life. He had been going to school for about six months. During that time he had given no trouble concerning his conduct in the school-room. His teacher reported, however, that mentally he had been doing practically nothing.

An Original
Boy

This was true in spite of the fact that his sister spent a large part of every evening endeavoring to teach him his lessons for the following day. To this the boy did not take kindly and usually the sisterly attempts to improve his scholarship ended in a domestic storm. The sister said he was stupid; the father said he was all right; the mother simply folded her hands in resignation and said nothing at all.

Outside the home some said the boy was a baby, and others said he possessed a wisdom beyond his years. With due gravity he would discuss topics ordinarily talked about only by grown people. When, however, he attempted to play with the other boys and in one of the usual quarrels that arise in boyville one of the other youngsters struck him, instead of fighting back he would immediately set up a wail and run home to his mother. Occasionally he attempted to play by himself with his automobile, but if he happened to upset it and fall out the same lachrymal result followed. This, according to the mother's assurance, happened in spite of the fact that he was never out of the sight of his sister or herself!

In the evening he spent part of the time in the cellar working with his father, who was interested in mechanical contrivances. The boy could assemble the parts of electric apparatus, arranging the cells, wire, and bells so that they would ring. He could connect an incandescent lamp so that it could be lighted. He could start a gas engine in the cellar and operate it. For a six-year-old boy of rather light build, he made a good record in this particular line. In fact, it presaged what was revealed by the Binet tests, namely, that the boy was about one year beyond the mental attainment of the average child of his age. In school, however, he was counted backward; at home, by his sister, he was declared stupid.

The fact was he was mentally advanced, and the difficulty which he encountered arose from the fact that he possessed originality. It happened with him that he had a father who had accidentally hit upon the proper method of education by proceeding from the concrete to the abstract. The boy's perceptions were being trained as they should be for his age. He was not only allowed, but encouraged,

to vent all the healthy curiosity of a six-year-old boy in seeing things, handling things and working with things. During his association with things, which to him were throbbing with living and vital interest, he was storing up visual memory images of inestimable value to his future intellectual development. The foundations of a true and permanent education were being laid, and laid so deeply and solidly that they would be able to bear any further intellectual edifice reared upon them.

On the other hand, there were great defects in his all-round development. His adult gravity was due to his association with grown people, and his babyishness to the lack of that robust and vigorous masculine development which could come to him only by fighting his own battles in the world of his peers. Both of these faults would dwell in any similar boy in the same environment.

With these three characteristics of infantilism, adultism and originality, all quite naturally developing from his environment and from his innate impulses, the ordinary public school had no method of dealing.

Why He
Gave
Trouble

Framed and fitted as it is for the average typical child, it has no room in its system for the one who either lags behind or pushes ahead, and is especially confused and confounded by any pupil who is so original and self-expressive as to refuse to fit himself into its traditional molds. Hence this boy gave trouble in school, but the trouble that he gave was due to a very admirable trait, which in later life may make him one of the famous men of his time. In short, here was a mental deviate, but one who is distinctly not retarded, at least in anything except in his ability to play with boys of his own age.

To illustrate again, a request was made by a school-teacher for advice concerning a ward of hers who was

described as a girl of seventeen with a bad family history, and who exhibited profound tendencies toward petty theft, deceit and immoral conduct. So grave had these tendencies become that, in the estimation of the foster-mother, it seemed absolutely necessary to place the girl in some institution where the natural result of her inclinations would be prevented. As she lived in a neighboring town, it was necessary for some one to accompany her to Philadelphia. This the teacher undertook to do on a day when she had some business in this city. The girl in question was to be left at a certain place and called for by the social worker. Upon the morning of her examination the psychologist in attendance was informed by telephone that the young lady who was to meet him on that morning had arrived in the city, and was awaiting the coming of the social worker to bring her for examination. The sound of her voice, the enunciation and manner of expressing herself, and, withal, the fact that though she was a country girl she had enough initiative to call by telephone in a most business-like way, and announce the condition of things in the best form possible, were enough to convince the psychologist that he did not have to deal with a backward girl. The same fact was instantly impressed upon the social worker when she arrived at the place where the girl was stopping. She found the possibly mentally deficient and morally imbecilic girl in the centre of a group of young ladies with whom she had made herself well acquainted, and to whom she presented the social worker, after she had introduced herself with a display of readiness and total lack of embarrassment to be expected only of one of large experience with the world. She then informed the social worker that she was ready to go to the clinic for examination, and

An Ad-
vanced Girl

that one of her new-found friends had concluded to go with her.

At the clinic she exhibited none of the confusion or shrinking which might have been expected, but she appeared easy and self-confident in all she said or did. Because of her home training she observed the proper decorum in everything, but underneath the proper exterior there appeared an obtuseness or lack of delicacy, which carried off things with a *sang froid* suitable to a woman of twenty-five over-familiar with the world.

The examination revealed that the girl had gone through school without any difficulty, in fact she said that she had graduated a year before the usual age. She was bright, vivacious, answered all the questions with readiness and volunteered items of information that showed her to be thoughtful of things far beyond her years. She had already made up her mind as to her future profession for life, and had begun some preparation toward the consummation of her plans. She posed as a model of decorum. She averred she never went to the theatre, except to see classic plays; she did not dance; she loved work; she never read such light literature as novels, nor indulged in any kinds of ordinarily frivolous conversation or conduct. The association tests, however, revealed that the undercurrent of her mind seemed to run along the ordinary channels of a girl of her age. This undercurrent was somewhat in harmony with the statement made about her real conduct, for, as a matter of fact, it indicated that she was like the usual girl of that particular age,—sensitive to the attractions of the opposite sex, and that her protestations of whole-souled devotion to austere ideals in thought and conduct were the result of a sharp intellect reacting to an oppressive environment. Due, in all probability, to the fact that she

was living with an old lady and under the strict discipline of a school-teacher, who spent her evenings doing an excellent piece of religious service for the community, her sensitivity on the one point was overdeveloped. At any rate, it was serious in the eyes of her teacher-benefactress, who viewed such conduct of the girl, as standing on the street corner and talking to several boy friends instead of coming home immediately in the evening, as shocking and certain of leading her to her early perdition. While there was very little in the actual conduct of the girl to forebode such a dreadful outcome, much more was to be feared in her general behavior. She was anything but backward; her whole demeanor was distinctly forward, and, though not immodest, yet lacking in modesty. She was a moral deviate and, judged by the standards that rule the narrow feminine world of her teacher-friend, fearfully and abnormally so. What her future will be is a question, and a most interesting one, for no doubt she possesses marked possibilities for good or evil. At present the probability is that she will go into some good home where there will be given her the sympathetic advice and direction she needs. The girl does not suffer from backwardness; in fact, backwardness, in some respects, would be to her a distinct advantage and improvement.

Retardation is a Relation to a Normal.—Retardation, then, let us remember, is merely the name of a relation, a relation, too, having meaning only after some standard of normal progress is recognized. It means that the backward one is behind someone else; he does not go as fast as others; he does not keep up with his companions. In every case, a standard or normal progress is more or less clearly implied. If the ordinary observer is asked to make

Why She
Gave
Trouble

explicit the standard by which he measures retarded children, he immediately replies, "Why, the standard is the normal child," meaning by that the usual, average or typical child. In comparison with him all others are abnormal, unusual or atypical. Such a proceeding has the merit of simplicity at least. The first difficulty arises from the fact that the average normal or typical child does not exist in real life. He cannot be set up before us for examination and comparison. The precise meaning of the words normal, typical, and average is hard to give.

The Meaning of Normal.—However, they do have a meaning, though a somewhat indefinite one. They refer to an ideal in imagination. The ideal is a growth. Every child seen makes an impression. From the quota of these impressions contributed by each child, gradually a composite mental picture grows up which becomes the "normal" or "typical" child. Those who study the most children have the most exact ideal. Those children who in actual life diverge from this picture to a more or less definite extent, or in certain characteristics, are called abnormal or atypical. But, just how to define or accurately to describe in words either the normal or the abnormal is difficult in the extreme. There are such a multitude of minute and individually insignificant characteristics to be taken into consideration. In all but extreme and striking diversions from type, it is the cumulative effect of these many casually unnoticed characteristics which determine the experienced observer in his judgment, and gives that judgment more the quality of an intuition than of an analytic conclusion. Because of this fact, in the examination of children, experience on the part of the examiner will probably always count

for more than either methods of examination or kinds of tests used.

To the formulation of a standard of normality at once practicable, objective and precise, students have given much time and attention. Many have been suggested, and not a few systems of mental measurements based upon them have been developed. It would be manifestly impossible to even notice all of them, but three are described here as illustrative of the problems involved. For convenience they may be called the individual, the social, and the pedagogical respectively.

The first or individual standard is an imaginary norm. It is an attempt to measure the child by himself, or by what he ought to be. That is, the fullest all-around development possible for each individual is accepted as the standard of each one's normal condition, and anything short of that is called retardation. *Prima facie*, the measure has claims to consideration. But what one ought to be or would be under right conditions, mentally, physically or morally, is purely imaginary or problematical. Probably no one feels that he has had the fullest and fairest chance, and that with some other possible environment and training he would have been far more advanced intellectually, and possibly his acquaintances concur in the opinion. The acceptance of such a judgment, therefore, would make us all "backward" or "retarded," and, worse still, it would make a fully educated idiot normal! Even if the standard of fullest development is rendered more precise, and to some extent objective, by saying it consists in the most perfect possible development of each individual cortical cell and cerebral tract, it comes no nearer to a feasible application. The perfection of cerebral systems—to say nothing of reflex centres and peripheral organs—is

as remotely imaginable as the possible perfection of psychic powers.

Quite naturally, the second or social standard has come into existence. It represents the judgment of the community upon any one's mental ability made by comparing him with others in their daily lives of work and play. The every-day observation that a certain child does not learn common things like dressing, washing, eating and playing games as rapidly as his brothers and sisters did at his age, or as readily as his companions do, may be of value and significance in so far as it calls attention to the need of fuller investigation. But the social standard expressed in the opinions of parents, friends or teachers is altogether too biased and too crude to act as a scientific measurement. Though it may go so far as to establish the presumption that the child is backward and thus lead to further examination, it does not begin to be precise enough for determining the exact degree of the backwardness. Dr. Tredgold attempts to make this judgment somewhat more definite by indicating what degree of mentality a normal person must have. "Our best definition of the 'normal' mind," he says, "must be a degree of intellectual capacity sufficient to enable its possessor to perform his duties as a member of society in that position to which he was born."⁷ This definition, of course, as Dr. Tredgold himself points out, will make normality, and consequently mental deficiency, depend to a great degree upon social circumstances. If, in any social stratum, the struggle for existence can be made easy by artificial conditions like the possession of wealth and the ability to command abundance of aid, the

Definition
of
Normal

⁷ Mental Deficiency, A. F. Tredgold, 1908, p. 2.

mentality of the person so situated can by no means be determined in comparison with that of other people in harder circumstances. A society woman may maintain her prestige, a king, aided by a wise counsellor, may retain his throne, and a rich idler may pass muster as a "good fellow" all his life, and yet all of them be feeble-minded in the technical sense of that word. Yet this definition, from many points of view, is one of the best we have at the present time.

To invest this indeterminate standard with more precision, Binet made tests upon several hundred normal children, and from his experiment developed a set of questions and tasks which he believes have the desired qualifications for accurately and absolutely determining the degree of backwardness of any child independent of his social position or of any pedagogical training which it may have had. The essentials of his standard are contained in the following quotation:

"The intellectual faculty appears to us to be independent not only of instruction, but of that which we might call the academic faculty; that is to say, the faculty to learn at school, the faculty of assimilating the instructions given at school with the method used at school.

"In our former researches concerning the recruiting of the abnormal, feebleness of the academic faculty was the sole criterion of normality employed. We said:—Every scholar is abnormal who is retarded three years in his studies if that retardation is not excusable on account of insufficient time spent at school. It seems to us wise and prudent to admit that this academic aptitude does not in all cases necessarily accompany the intellectual faculty which we measure by our method. From the first, theoretical reasons have induced us to avoid this confusion. It seems to us that the academic aptitude depends upon something else than intelligence. For success in study certain qualities are necessary which depend above all upon attention, upon will, upon the character, for example: a certain docility, a regularity of habits, and above all a continuity of effort. Even an intelligent child would learn little in class if he never list-

ened, if he passed his time in making notches in his desk, chuckling, and in 'cutting' as a bad soldier. The insufficiency of attention, of character, and of will, show themselves not at all, or very slightly, in our examination of intelligence; the test is too short and the child is not left enough to himself. In fact, we have never encountered in our examinations any inattentive children except among those between three and four years of age. All of them made great effort; they were with us and our presence alone would have sufficed to prevent inattention. There is nothing in the conditions of this test by which one is able to measure the ordinary distractions of attention of the child such as occur when he is left to himself."⁸

The third measure of retardation is the pedagogical. It is limited to a rather narrow field, but within that field is perfectly defined and objective. Since, also, a large number of the cases coming to the psychological clinic are children whose difficulty is backwardness in their school work, it would seem justifiable to give a somewhat large consideration to this method of measurement in this connection.

The Pedagogical Standard.—Since retardation is a school phenomenon and since the first attempts to give it anything like scientific attention were made in public schools, class-grades were turned to for aid. Assuming that a normal pupil was promoted from one grade to another each year, early investigators adopted for their first standard the correspondence between grade standing and age. Thus, the children who began school at the legal age and were promoted every year were counted normal; those in the same grade who were older by at least one year than the normal pupil were considered backward or retarded. However, it was soon discovered that in the school under investigation such a standard would throw nearly three-quarters of the pupils into the backward

⁸ *L'Annee Psychologique*, Tome xiv, 1908, p. 75.

class. Therefore, the norm was changed and only those who were two years or more behind the grade corresponding to their age were retarded. A concrete illustration will make the *modus operandi* clearer.

Dr. Witmer writes of his first attempts to define retardation. "I undertook," he says, "to define as pedagogical retardation the number of years that a child was behind the grade for his age. If we wish to ascertain the causes of retardation in school children we must first obtain the whole number of retarded children irrespective of any preconceptions we may have as to the causes. Pedagogical retardation follows from the supposition that a child enters upon the first years of school work before he has passed his seventh birthday. If he advances one grade each year, he will complete the eight years of the elementary course before he has passed his fifteenth birthday. This establishes a theoretical age limit for each grade, apparently not excessive in its educational requirements, for the child that leaves the elementary schools in his fifteenth year cannot complete the high school before his nineteenth year, nor graduate from college before his twenty-third year, and yet in the elementary schools in Camden 72 per cent. of the children exceed this theoretical age limit. It seemed absurd to assert that 72 per cent. of a city school system were retarded, and, moreover, the group of children obtained in this way was too large to be studied for the purpose of discovering the causes of their retardation. It was therefore determined to allow one or more years in excess of this theoretic age limit. In the city of Camden 47 per cent. were found to exceed the age limit by one year or more, 26 per cent. by two years or more, 13 per cent. by three years or more, and 5 per cent. by four years or more.

The Con-
ventional
Standard

It was determined to call all those children pedagogically retarded who exceeded the age limit by two years or more. This definition of retardation has been generally accepted in subsequent investigations of retardation statistics in other cities."⁹

The latest considerations have not materially altered the standard first suggested, as is shown in Mr. Ayres' statement:

"The method of determining the number of retarded children in a given school system which has received most general acceptance on the part of school men is the method which enumerates the children by Ayres' Standard ages and grades and puts all of the children who are older than a determined age in each grade into a group designated 'Above Normal Age.' These children who are older than they should be for the grade they are in are considered 'retarded.' Thus used the term designates a condition and it is applied with equal propriety to those children who are over age on account of slow progress, and those who have progressed normally but entered school late.

"The method has come into general acceptance because, all things considered, it is the most satisfactory standard by which to measure retardation.

"Statistics based on the time pupils have spent in each grade are exceedingly rare, often unreliable, and usually are noncumulative. That is, they deal with each grade as a separate unit and fail to tell us how much time the pupil has gained or lost in the entire course.

"Statistics giving us the figures as to grade and age distribution, on the other hand, are simple, certain, easy to gather, and embody valuable information as to many

⁹ What is Meant by Retardation? Lightner Witmer, *Psychological Clinic*, vol. iv, No. 5, Oct. 15, 1910, pp. 128, 129.

conditions and results of school work. Their application to the problem of retardation is so easy that the process may be developed by any one, however unversed in statistical procedure."¹⁰

Backwardness Alone does not Classify a Child.—

From our study of backwardness we are now able to see that "backwardness" is not a disease, nor a fixed condition, nor even a fault. It has many meanings or, until a standard is explicitly stated, it has no meaning. It cannot be accepted as a "diagnostic symptom" in any case. All slow, dull, stupid, borderland, feeble-minded, imbecilic, and idiotic children may be backward. Some bright, quick, witty, brilliant, talented, children, who may later in life become famous men and women, may be backward. Writers on child-psychology like Hall and Swift have shown the entire possibility of such cases. School children, without brain lesions and without physical defects of any kind, may be backward. Children may be retarded pedagogically and advanced socially, or *vice versa*. Backwardness, or retardation, in itself and by itself, is not a mark by which any large or fruitful classification of children can be made, and, we repeat, is absolutely useless and even harmful as a designation, unless the standard by which the backwardness is measured is made clear and explicit.

Curable and Incurable Backwardness.—In relation to some chosen standard backwardness is a fact of observation. To make it significant for the clinicist it must have some further attributes. Upon the principle of classification we have already laid down that additional attribute is "curable" or "incurable." If a child is curably

¹⁰ Laggards in Our Schools, Leonard P. Ayres, pp. 36, 37.

backward, he, by that fact alone, enters into one great class of children retarded from any cause whatsoever; if he is incurably backward, he enters at once into another great class commonly called feeble-minded or mentally defective. Such a distinction is fraught with the gravest practical importance for the child and all concerned with him. The determination of this vital step is one of the most important in making a diagnosis. How it is to be done, by what examinations and tests, is reserved for the next chapter. Sufficient is it now to say that the distinction does not rest upon any symptom-complex or appearance of the child alone. Curably backward and incurably backward children often look exactly alike, know about the same amount of school lore, act about alike in society and, sometimes even,—if there is any advantage either way,—the incurably backward or feeble-minded child has it. A known feeble-minded boy came from an institution and was able to graduate from a manual training high-school in one of our eastern cities. Others have entered college and some of them have been graduated, and a few of such have given a fairly good account of themselves in the world. One of the commonest tragedies of our social life is to discover that a father or mother is feeble-minded only after the birth of an imbecilic child.

Sub-classifications of the Curably Retarded.—So far we have differentiated between two great classes of mentally retarded children. Before us lies the immediate task of further sub-classifying the two classes. For the incurably retarded this is not difficult. Much has been done already and the schemes are fairly simplified. Not so for the curably backward. They furnish chiefly a pedagogical problem and as yet not enough has been

done to bring out clear and well-accepted separations of the varieties into groups. Dr. Groszmann offers a social classification as follows:

SUBNORMAL CHILDREN

(Those whose potentials are incomplete or undeveloped)

1. *Defective Children.* Hereditary and congenital causes.

Epileptics, blind, deaf-and-dumb, deformed, paralytics, crippled, etc. *These children can never attain the perfect norm of human nature, as their potentials are incomplete.*

2. *Children of Arrested Development.* (Acquired abnormality or defectiveness.)

a. *Pathological Classes.* Children born apparently normal but having their development checked by:

1. Hereditary causes, manifesting themselves at certain development periods.

2. Special causes, as diseases, fright, accidents, etc. The arrest of development may be only partial, as in the case of children deformed by accident; then there will be mainly a condition of incompleteness, as in Group 1, Defective Children.

b. *Submerged Classes.*

Environmental influences have prevented them from attaining full maturity.

Children of arrested development will remain essentially subnormal, no matter how well they may be educated within their limits.

3. *Children of Rudimentary or Atavistic Development.* The primitive type, representing mental, moral, and social instincts and activities on the savage, barbarian, or generally uncivilized level.

Primitive races.



Mentally retarded on account of tubercular inheritance, malnutrition, and useless teeth.



Mentally retarded on account of malnutrition and other physical defects.



Mentally retarded on account of neglect, malnutrition, defective eyes, and speech defect.



On the borderland. Might be saved by medical treatment and a change of environment.

Atavistic individuals. These approach the abnormal level. They represent a revision of instincts and capacities in spite of being born from apparently normal parents.

Dr. Bruner divides school children into five grades, two of which are the "typically retarded" and the "backward children."¹¹

For the purpose we have in view, probably the best principle of sub-classification for curably backward children is that suggested by Dr. Witmer and rests upon the speed with which they recover their normal position in society or in school. According to this method we will place in the first class those who are immediately curable, meaning by this that as soon as the physical defects within the child himself, or in his surroundings, are corrected or removed, he immediately takes his proper place in school or in society.

A. L., Case 428, is a girl eight years old, who was brought to the clinic for retardation work. There was nothing in her personal history nor in the family history to lead to the belief that she might be permanently mentally defective, and her home environment, while poor, was pleasant and neat.

However, the physical examination brought out the facts that her eyes were irritated, her teeth crooked, and her tonsils enlarged. She was taken to the eye clinic, where it was found that she did not need glasses at present, but the advice was given that a lookout be kept for headaches and eye-strain as she grew older. At the nose and throat clinic, adenoids and enlarged tonsils were diagnosed. She was taken to the University of Pennsylvania Hospital, and operated upon for both of these defects.

¹¹ Proceedings of the National Educational Association, 1909, Abnormal Children, Frank G. Bruner.

She was again returned to her home, and again attended the public school as usual. Her mother noticed an immediate improvement in her appetite, and was pleased to find that the child was not perpetually taking cold in her head as she had done before. Later on the mother also reported that A. L.'s teeth were straightening somewhat and that altogether she was in better health.

At school the teacher promoted her on age, and found her quite able to keep up with the work of the higher grade, proving that she had immediately recovered from her backwardness after the necessary surgical treatment brought about by her visit to the clinic.

A second class is composed of those who are rapidly recoverable. This includes all who require a period of pedagogical training after the removal of their physical defects. During that time they make rapid progress, and in a comparatively short time regain lost ground.

A third class may be called the slowly recoverable, including all those children who require a long, careful and persistent course of education after the removal of the physical defects, before they are again able to take their places with normal children. It can be immediately seen that this last class forms a difficult group to classify because the clinical picture they present and the time they require to show improvement seem to ally them with the class of permanent mental defectives. Their recovery is so very slow and tedious, and oftentimes possible only under the best environment and training, that judgment as to the final classification must frequently be held in abeyance for a long time.

Summary.—We have now made this much progress toward determining the classes to which clinic cases must be assigned: all of them are mental or moral deviates; all

are curable or incurable deviates; this fact has peculiar significance to the mentally retarded cases; of the curably backward there are several sub-classifications: the immediately recoverable, the rapidly recoverable, the slowly recoverable. We will now turn to the second great division of incurably backward children and learn what we can of the classification and sub-classification in common use for their assignment.

Definitions of the Incurably Retarded.—That great class of children who must be classified as incurably backward belong to the group technically known as mental defectives, dementes or amentes. To define exactly what dementia or amentia is, is one of the difficult problems of the study. The difficulties encountered by Seguin in 1866 are still present. He undertook to define idiocy and to give the synonyms “named by Savage, Amentia; by Segar, *Imbecilites ingeni*; by Vogel, *Fatuitas ingeni*; by Linnæus, *Morosis*; by Cullen and Fodere, *Demence innée*; by Willis, *Stupiditas*; by Pinel, *Idiotism*; by some English writers, *Idiotcy*; by Esquirel and the majority of encyclopædias and dictionaries, *Idiocy*.

“We shall use this latter term,” he continues, “to express the physiological infirmity, and would like to see the name given to it by Pinel,—Idiotism,—preserved to express the specific condition of mind pertaining to idiocy.

“Its definitions have been so numerous, they are so different one from the other, and they have so little bearing on the treatment, that their omission cannot be much felt in a practical treatise. Our own, if objectionable, will be found at least to correspond to a plan of treatment, both supporting each other; and may suffice until a better definition and a better treatment can be devised.” He then offers his definition in the following terms:

"Idiocy is a specific infirmity of the cranio-spinal axis, produced by deficiency of nutrition in utero and in neonati. It incapacitates mostly the functions which give rise to the reflex, instinctive, and conscious phenomena of life; consequently, the idiot moves, feels, understands, wills, but imperfectly; does nothing, thinks of nothing, cares for nothing (extreme cases), he is a minor legally irresponsible; isolated, without associations; a soul shut up in imperfect organs, and innocent."¹²

However, what is generally meant by the word is clear enough. As Dr. Tredgold says, "The essence of mental defect is that it is incurable, and by no 'special' education, however elaborate, can a case of amentia be raised to the normal standard. Some defect must always remain, and upon this fact all authorities agree."¹³

In a previous portion of the same work, between "dementia" and "amentia" he has made a distinction, dependent upon the previous mental development of the sufferer. In that place he says, "Mental defect occurring subsequently to mental development may be compared to a state of bankruptcy, and is more fittingly described as dementia (*de*, down, from; *mens*, mind); whilst the person whose mind has never attained normal development may be looked upon as never having had a bank account, and this state is designated amentia (*a*, without; *mens*, mind). In both of these, of course, there is literally mental deficiency; but in view of the convenient and growing tendency to restrict this term to the latter class, I shall in this book use it in a specific sense as synonymous with 'amentia.'"¹⁴

¹² Idiocy and its Treatment, Edward Seguin, 1866.

¹³ Mental Deficiency, A. F. Tredgold, p. 127.

¹⁴ Ibid., p. 1.

He then proceeds to define amentia as "a state of mental defect from birth, or from an early age, due to incomplete cerebral development, in consequence of which the person affected is unable to perform his duties as a member of society in the position of life to which he is born."¹⁵

It will be noted that this definition is partially causal. It vests the reason for the mental defect in an incomplete cerebral development, but, on the other hand, it is also prognostic in the sense that it asserts the permanent inability of the affected person to perform his duties as a member of society. This is in agreement with his statement that the essential characteristic of amentia is its incurableness.

It is to be noted, also, that this definition places the essence of amentia in its incurability. It is in thorough accord with the problem of classification presented in this chapter as the particular one to be solved by clinical classification. We have said that the cases that come to the clinic are already part classified to the extent of declaring that they are mental or moral deviates. Of the mental deviates, by far the largest number manifest their deviation from the normal by their mental retardation. Concerning this, the immediate question is whether retardation is permanent or temporary. If it is permanent, by the definition given above, the retarded mental deviate must be classed as an ament. This step in the classification, though, in a sense rough, imperfect, and incomplete, from the point of view of a thoroughgoing classification is still vital and final. That is to say, once that a child is classified as an ament, he is shut off from the possibility

¹⁵ Mental Deficiency, A. F. Tredgold, p. 2.

of being classified as a normal person. As to his future career, as has been said more than once before, this step is of the most vital significance, as upon it hinge his training, treatment and final disposal.

To again quote our authority, "It is not, however, to be assumed that amentia is merely a subtraction in varying degree from the normal. Although the contrary might be thought, nevertheless the two conditions do not merge into one another, and between the lowest normal and the highest ament a great and impassable gulf is fixed. Whilst the former is heavy, stolid, and uniformly dull-witted, he has yet sufficient common sense to look after his interests and hold his own in that environment in which Nature has placed him. The mildest ament, on the other hand, may show no apparent dulness; he may even be bright and vivacious; and in some of his abilities immeasurably superior to the clodhopper. But the other faculties of his mind are not present in like proportion. Instead of harmonious working, there is discord, and in possession of that essential to independent existence—common sense—he is lacking, and the want can never be supplied.

"The difference has been well described by Sir J. Batty Tuke, who says: 'Where in theory the morbid and the healthy types might be supposed to approach each other, we find in practice that no such debatable ground exists. The uniformity of dulness in the former stands in marked opposition to the irregularity of mental conformation in the latter.'"¹⁶

Sub-classification of the Incurably Retarded.—The next step in the classification is the assignment of the

Amentia is
an Absolute
Mental
Status

¹⁶ Mental Deficiency A. F. Tredgold, pp. 2, 3.

ament to that particular sub-class of imbeciles or idiots to which he belongs by reason of his degree of mentality. For it must be remembered that up to a certain limit all degrees of mentality are represented amongst the mental defectives.

The most usual sub-classification divides amentia into three divisions or degrees. Beginning with the nearest to normal, Dr. Tredgold has assigned to this ^{Feeble-mindedness} class the name feeble-minded, or high-grade amentia. This, he says, "Is the mildest degree of mental defect, and the feeble-minded person is *'one who is capable of earning a living under favorable circumstances, but is incapable from mental defect existing from birth, or from an early age, (a) of competing on equal terms with his normal fellows; or (b) of managing himself and his affairs with ordinary prudence.'*"¹⁷

"IMBECILITY (MEDIUM-GRADE AMENTIA).—The imbecile is defined as *'one who, by reason of mental defect existing from birth, or from an early age, is* ^{Imbecility} *incapable of earning his own living, but is capable of guarding himself against common physical dangers.'*

"IDIOCY (LOW-GRADE AMENTIA).—The idiot is defined as *'a person so deeply defective in mind* ^{Idiocy} *from birth, or from an early age, that he is unable to guard himself against common physical dangers.'*"¹⁸

Dr. Tredgold's classification is, to a large extent, social, in that it rests upon the ability or inability of the affected person to take his place in society.

¹⁷ A. F. Tredgold, *Mental Deficiency*, 1908, p. 75. This and the following definitions from Tredgold were suggested by the Royal College of Physicians of London.

¹⁸ *Ibid.*, pp. 75 and 76.

Goddard's Classification.—Still another classification is that used by the Vineland Training School, of Vineland, N. J., which is similar to the one of Dr. Tredgold, with the exception that in the place of "feeble-minded" the word "moron" (from the Greek word meaning fool) is substituted.

"We presented to the American Association for the Study of the Feeble-minded, at its meeting this year, an industrial classification, which it has tentatively adopted. The feeble-minded are divided into three large groups, very much as has been done in the past,—the lowest grade is called 'idiots,' the middle grade 'imbeciles,' and the highest grade, who were formerly called 'feeble-minded,' we now propose to call by an entirely new term, 'moron.' This is a Greek word, and means those who are mainly lacking in judgment and good sense. Each of these groups may again be divided into three,—the high, middle and the low, thus making nine degrees of defectiveness, all told, with ten in the scale standing for the normal child, including those who are simply backward. The low-grade idiot is the perfectly helpless child, the middle-grade idiot the one who is able to feed himself, but who eats almost anything; the high-grade idiot the child who eats with some discrimination, discarding that which is not food. The low-grade imbecile, he who can do simple tasks, very simple indeed; the high-grade imbecile, the one who can do tasks of short duration and little errands in the house,—washing dishes, scrubbing floors, washing and sweeping, perhaps. The low-grade moron, the boys and girls who can run errands, do light work, make beds, etc., scrub, mend, care for a room, if there is no great complexity of furniture; the middle-grade morons, those who can do institution routine work; and the high-grade

morons, who can do fairly complicated work, with only occasional supervision,—can run simple machinery, take care of animals, only are unable to plan anything.”¹⁹ This classification further elaborated to fit every age of child up to twelve years is appended. This table not only carries out the classification to its logical conclusion, but at the same time roughly correlates it with the Binet measuring scale of intelligence.

AN INDUSTRIAL CLASSIFICATION CORRELATED WITH THE BINET CLASSIFICATION MADE BY THE VINELAND TRAINING SCHOOL, NEW JERSEY.

Mental Age			
Under	(a) Helpless. (b) Can walk. (c) With voluntary regard.	Low	Idiot
1 year	Feeds self. Eats everything.	Middle	
1 year	Eats discriminatingly.	High	
2 years	No work. Plays a little.	Low Middle	Imbecile
3 years	Tries to help.		
4 years	Only simplest tasks.		
5 years	Tasks of short duration. Washes dishes.	High	
6 years	Little errands in the house. Dusts.		
7 years	Errands, light work. Makes beds.		
8 years	Heavier work. Scrubs. Mends.	Low Middle	Moron
9 years	Lays bricks. Cares for bath-room.		
10 years	Good institution helpers. Routine work.		
11 years	Fairly complicated work with only occasional oversight.	High	
12 years	Uses machinery. Can care for animals. No supervision. Cannot plan.		

The advantage of these fuller classifications lies in the fact that they offer more minute possibilities for classifi-

¹⁹ New Jersey Training School for Feeble-minded Boys and Girls, Twenty-second Annual Report, 1910, pp. 136, 137.

cation, and therefore come nearer to the true state of the case, namely, that no such sub-classification actually occurs

in nature. While it is practically true, as has been noted above, that there is a natural and absolute demarcation between the normal and the ament, when the process of definition is carried further than this, it is done for the purpose of study and convenience. The truth is, that degrees of mental deficiency merge gradually from one into the other, beginning from the highest type to the lowest. That is to say, individuals can be actually found who altogether present an indefinite number of degrees of mentality, and no sharp or clear lines can be drawn between them. All that we can hope to do is to mark out certain distinctive types, to make classifications suitable for these and to assign others to classes according to their approximation to the average types.

Barr's Classification.—Finally, we offer a third classification made by Dr. Barr. It is called educational, in that all the characteristics of its several divisions are the degrees or limits to which the mental defectives, included within the class, can be educated. It is therefore practical and useful for the purpose of clinic work, since the problem of future training and education constitutes a very large part of its classification.

The scheme of classification comprises three classes with five sub-classes of subnormals; the imbeciles with the three sub-classes of high-grade, middle-grade and low-grade; the idio-imbeciles, and the idiots sub-divided into superficial and profound. The idiots are also classified according to their disposition into apathetic and excitable. These various classes, together with their capacities for training and the best ultimate disposal to be made of them, are given as follows:

Advantage of
Fuller Classi-
fication

EDUCATIONAL CLASSIFICATION OF THE
FEEBLE-MINDED

IDIOT.

Asylum Care.

Profound	{ Apathetic Excitable }	Unimprovable
Superficial	{ Apathetic Excitable }	Improvable in self-help only.

IDIO-IMBECILE.

Improvable in self-help and helpfulness.

Trainable in very limited degree to assist others.

IMBECILE.

Long Apprenticeship and Colony Life Under Protection.

Mentally deficient.

Low-Grade: Trainable in industrial and simplest manual occupations.

Middle-Grade: Trainable in manual arts and simplest mental acquirements.

High-Grade: Trainable in manual and intellectual arts.

MORAL IMBECILE.

Custodial Life and Perpetual Guardianship.

Mentally and morally deficient.

Low-Grade: Trainable in industrial occupations; temperament bestial.

Middle-Grade: Trainable in industrial and manual occupations; a plotter of mischief.

High-Grade: Trainable in manual and intellectual arts; with a genius for evil.

BACKWARD OR MENTALLY FEEBLE.

Trained for a Place in the World.

Mental processes normal, but slow and requiring special training and environment to prevent deterioration; defect imminent under slightest provocation, such as excitement, overstimulation or illness.²⁰

A Combination of Classifications.—The best idea of what is meant by mental deficiency in general and by each grade of deficiency can best be gained by a study of several classifications and descriptions massed together so as to show their similarities and differences. For this purpose we append four such classifications made by prominent authors in the field.

CLASSIFICATIONS

Class I, By Goddard. Moron:

1. High-grade: can do fairly complicated work with only occasional or no supervision; can run simple machinery, take care of animals; only unable to plan.

2. Middle-grade; can do institution routine work.

3. Low-grade: can run errands, do light work, make beds, scrub, care for rooms if there is no great complexity of furniture.

By Barr. Imbecile:

1. High-grade: trainable in manual and intellectual arts.

2. Middle-grade: trainable in manual arts and simplest mental acquirements.

3. Low-grade: trainable in industrial and simplest manual occupations.

²⁰ Mental Defectives, Martin W. Barr, 1904, P. Blakiston's Sons & Co., Philadelphia, p. 90.

By Binet. Feeble-minded:

Every child is feeble-minded who knows how to communicate with his fellows by word and by writing but who exhibits a retardation of two or three years, in the course of his studies, unless that retardation should be on account of insufficient training.

By Tredgold. Feeble-minded:

1. First-grade: can make tolerable progress in elementary school work; can write a simple letter, read children's books, can perform simple arithmetical exercises mentally. Can do good manual work.

2. Second-grade: fall considerably behind the former in purely scholastic attainments, and also, although not to the same extent, in handicraft. Are rarely capable of mental and seldom of paper arithmetic, and their reading and writing ability extends no further than simple words of one syllable. Have decidedly less general intelligence.

3. Third-grade: form a connecting link with the imbeciles, from whom they are indeed but little removed. The improvement effected by the special school is limited to the development of some capacity of manual work under supervision, and to the formation of habits of obedience, tidiness and regularity. Scholastic acquirements practically nil.

Class II, By Goddard. Imbecile:

1. High-grade: can do tasks of short duration and little errands in the house,—washing dishes, scrubbing, washing and sweeping, perhaps.

2. Middle-grade: can do simple tasks, very simple indeed.

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3. Low-grade: plays a little and tries to help but can do nothing alone.

By Barr. Idio-imbecile:

1. Improvable in self-help and helpfulness.
2. Trainable in very limited degree to assist others.

By Binet. Imbecile:

Every child is an imbecile who does not arrive at the ability to communicate with his fellows by writing; that is to say, one who is not able to express his thoughts in writing, nor to read writing nor printing, or, more exactly, to understand what he writes; when neither any difficulty nor motor-paralysis of the arms explains the non-acquisition of that form of language, but the fault of acquisition is entirely one of mental deficiency. A child should not be reckoned an imbecile except when more than the usual time has been accorded him for learning to read and write. The usual time in the schools is about six months, and a child who has been in school for about two years and has not been able to learn his letters has a fair chance of remaining an imbecile.

By Tredgold. Imbecile:

Those persons who, by reason of mental defect existing from birth or from an early age, are incapable of earning their own living, but are capable of guarding themselves against common physical dangers.

Class III, By Goddard. Idiot:

1. High-grade: the child who eats with some discrimination, discarding that which is not food.

2. Middle-grade: the one who is able to feed himself, but who eats almost anything.

3. Low-grade: a perfectly helpless child.

By Barr. Idiot:

1. Superficial: improvable in self-help only.

2. Profound. unimprovable.

By Tredgold. Idiot:

1. Partial or incomplete: primitive instincts present; some glimmer of the mind but not sufficient intelligence to understand and avoid the common physical dangers which threaten existence.

2. Complete, absolute or profound: defect so profound as to involve the fundamental organic instincts, and even that of sucking is absent.

By Binet. Idiot:

Every child is an idiot who does not arrive at the ability to communicate by word with his fellows; that is to say, one that is not able to express his own thoughts verbally, nor to comprehend the thoughts of others expressed verbally; when there is no trouble with audition, nor any trouble with the vocal organs to explain the pseudo-aphasia, which is due entirely to deficiency of intellect. If it is remembered that a normal child of two years should be able to understand the talk of others and to make himself understood by others, for his very simple needs, it is easy to make the distinction between the idiot and the normal.

What will be the final outcome of forming classifications? Which one will be adopted? Very probably, from what has already been intimated regarding the flexibility of the three-fold classification which gives nine sub-divisions, that

one will be the one eventually most acceptable to diagnosticians of mental deficiency. The simplicity and the symmetry of such a classification will make its appeal to a large number and render it easier and quicker of apprehension. However, when the general form of classification has been settled, the problem of sub-classification according to some definite principle or description remains. For example, at the present time Dr. Barr classifies according to educational standards, Binet according to speech ability, Dr. Tredgold according to ability to hold one's place in society, to care for one's personal affairs with prudence and to escape common dangers; while the Vineland Training School classifies according to industrial capabilities. In general, however, it would seem that all sub-classifications may be made according to pedagogical and sociological principles. The work, therefore, to be done in order finally to fix some one classification and make it as widely acceptable as possible is, first, to find by investigation and experimentation the pedagogical possibilities of each sub-grade of the mental defective and then by some method to find the industrial or sociological capabilities of each sub-division. These two could then be amalgamated and any individual could be classified according to his intellectual and social possibilities. Such a task would require much more unity and coöperation among the many workers in this field who are now proceeding each in his own way according to his chosen plan without much regard to what is being done by others.

A Blended Classification.—In order to give a brief hint as to how this can be done and also to furnish the practical student with a composite description of the various grades of aments, four classifications used by prominent authors have been brought together side by side and are given above.



A high-grade moron. Very deaf.



A twelve-year-old high-grade imbecile suffering from malnutrition.



High-grade imbecile. Much more capable than her appearance indicates.



A high-grade imbecile. Ten years old. Less capable than her appearance indicates.

VI

METHOD OF CLASSIFYING CLINIC CASES

IN the preceding chapter the classification of mental defectives has been considered in general. The meanings of backwardness and mental deficiency were discussed and the primary problem of clinical mental classification was shown to be the differentiation between the two. It was proposed that curability and incurability be accepted as the basis for classifying all mental and moral deviates respectively, and several systems of classification in common use were given with synoptic descriptions of their sub-classes.

We now turn to that other phase of classification which concerns itself with the process of measuring mental status by means of questions, tests and observations. Into a somewhat detailed description of this process we will enter, giving at the same time the reasons for asking the questions asked and for making the tests made.

First Steps in Making a Diagnosis.—When the clinician is brought face to face with the child to be classified, he first proceeds to get the case in hand by asking a few preliminary questions which settle immediately the kind of deviation with which he has to deal. It may be mental or moral or a combination of both. In every case the problem and the method of mental diagnosis, though not of training, is the same. Let us say, it is simple mental deviation. Another question or two reveals that it is a case of retardation in school work. Suppose the boy is ten years old and only in the second grade. When this much is clear, the next step is to determine whether

the stated retardation is curable or incurable. This is the critical though not final step in the whole process, and upon it depend not only the other later steps of diagnosis but also the training of the child. Surrounding it are all the practical difficulties hinted at in the previous chapter; difficulties not yet removed by the most elaborate schemes and which require the skill and long experience of an expert to remove them. The larger the number of tests brought to bear and the greater the opportunity of the examiner to study not only the child but all the influences having a bearing upon his condition, the more certain the results will be.

The Search for Causes.—In general the process is simple enough. It seeks to discover underlying causes, correlates or concomitants which, by experience, have been found to accompany one form or the other of retardation. They are to be found within or without the child himself. If without, they are pedagogical or sociological; if within, anatomical, physiological, or psychological. They may be further classified chronologically as pre-natal, natal, and post-natal. In all cases some are patently removable; some are irremovable. Some, too, are invariably correlated with incurable mental defects; others are not, and still others sometimes are and sometimes not. The process of mental diagnosis, then, resolves itself into a search for correlates which by their nature determine the curability or incurability of the mental or moral deviation.

Theoretically, the best way to accomplish this would be by a direct examination of the child's nervous anatomy. If, for example, the non-development of a cerebral lobe, or scar-tissue from previous meningitis, could be discovered, the prognosis would be immediate and final. In

some cases the required evidence can be obtained by direct inspection of the nervous system. Wherever end-organs of sense have been irretrievably destroyed at an early age the corresponding cerebral centres, both primary and secondary, must of necessity suffer a permanent cessation of development, and, hence, imbecility or "idiocy by deprivation," as it is called, must result. Such a state is recognized by writers upon idiocy. Dr. Barr mentions it as one common with deaf-mutes.

"Before leaving the subject of etiology," he says, "it seems fitting to mention, however briefly, 'idiocy by deprivation.' As has already been noted, many causes may be resolved into the single one of malnutrition, and may be traced in mental as well as in physical conditions. The lack or loss of any one sense avenue will preclude or arrest the development more directly dependent upon that one avenue, and the mind suffer a certain starvation, so to speak, as in the case of the blind or the deaf-mutism being an acknowledged example. True it is that other senses may be so aroused as to counterbalance or supply the loss of the one, but when there is lack of nerve force from weakness engendered by causes either congenital or accidental this fails, and 'idiocy by deprivation' ensues. Such cases are to be encountered from time to time in most institutions for the blind and deaf-mutes."¹

The Case of Helen Keller.—Some such instances of amentia, though thoroughly in accord with the scientific classification by incurable causes, furnish striking exceptions to the popular conceptions of idiocy. No ordinary layman would think of Helen Keller as mentally defective or an imbecile. Yet, strictly speaking, in spite of her

¹ Mental Defectives, Martin W. Barr, 1904, pp. 120, 121.

acquisition of French, German, Latin, and Greek, her early admission to and successful graduation from college, and her later relatively brilliant intellectual performances, she is and must always remain a mental defective. For she early suffered the permanent loss of hearing and eyesight, and no amount of training has been able to wholly overcome the loss. Color and sound to her must ever remain unknown and unknowable sensations. Her visual and auditory centres have remained unstimulated through long years, and, like all other unused organs, have not been developed and cannot be. Had it not been for the labors of Pereire with deaf-mutes, she might have remained dumb and all that opportunity for self-expression through speech would have been cut off and profounder idiocy resulted. Such examples are illuminating both to point out clearly the meaning of and also to illustrate the theoretical method for the discovery of mental deficiency.

The Case of Kaspar Hauser.—A case less famous than that of Helen Keller, which presents an incurable retardation on account of isolation from society, is that of Kaspar Hauser. He suffered from almost complete mental retardation due to the non-development of his brain on account of confinement from his earliest memories in an underground dungeon. When about seventeen years of age he was found wandering about the city gate of Nuremberg, Germany. He could give only his name and utter one sentence, "I will be a trooper as my father was." His education was undertaken by Prof. Daumer. His avidity for knowledge in all forms was wonderful. He learned rapidly and seemingly assimilated what he learned. However, possibly due to overtraining, he broke down and for a time his education had to be discontinued.

It was found that he had a remarkable faculty for smell

and for seeing things in the dark. This was attributed to the fact, which he stated after he learned to talk, that he had always lived continually seated on the ground in a small, dark cell. He had never seen the sky nor a human face, but was accustomed to find some bread and a pitcher of water near him when he awoke. The man who placed it there taught him to write his own name and to speak one sentence and finally brought him to Nuremberg gate. For a time his mental development proceeded with extreme rapidity. But his long isolation and constant lack of training and opportunity for learning had wrought an incurable effect upon his brain. After a time he could make no further progress. In 1833 he met his death, which was as tragic and mysterious as were his birth and life. By appointment he met a stranger in a public park who had promised to clear up the mystery of his birth. During the interview Hauser received a stab wound from which he died three days later. The autopsy showed a somewhat thickened skull and a rather small brain which did not completely cover the cerebellum, with convolutions smaller than the normal. On the whole, it would seem, despite the many contradictions, that his story was true, and that he presents an unique case of incurable retardation due to lack of training.

In the vast majority of cases presented at the clinic, the diagnosis is not arrived at by the direct observation of immediate causes. They must be discovered by more indirect processes. Remembering that the purpose of all inquiries and all tests is first to decide upon the curability or incurability of the deviation, and ultimately upon the degree of either retardation or intelligence, the clinician proceeds to rough-hew his case first by securing oral information upon the personal and family history of the child. Next

he makes a physical examination to corroborate or to dispel suspicions aroused by the family history, and lastly he comes to the mental test proper which will not only decide the degree of mental deviation, but also locate the mental defect either in general mental arrest or in some particular mental process like perception, memory or reason. This, in brief, is a bird's-eye view of the whole procedure. It now remains to take up each process more in detail.

Causes of Pedagogical Retardation.—The first step is to secure information on all those factors having a possible bearing upon the child's present condition which have acted upon him from the present moment back to the hour of his birth and beyond even to those pre-natal and hereditary influences that play such a peculiar and such a prominent part in determining the mentality of the feeble-minded. Assuming, as we did above, that our hypothetical case is discovered to be one of school retardation, the first inquiries, after questions of age and school grade, will seek to discover or to eliminate certain possible causes of this retardation. For instance, he may have started to school at a late age, or attended irregularly. Either fact may account for his retardation. To carry on our illustration, however, let us assume that he did start at the usual time and attended regularly. This at once establishes a presumption in favor of some peculiarity in the child. For the majority of the children under the same circumstances make better intellectual progress. Measured by usual school standards, he should be in the fourth instead of the second grade. His backwardness must be due to his inability or unwillingness to learn. If his general conduct is good and his teachers and parents testify to his willingness to do all he can, another possi-

bility is eliminated and the case is narrowed down to simple mental deviation characterized by retardation in school work.

The Personal History of the Child.—Still in search of the factors contributing to this situation, the examiner begins a careful inquiry into the personal history of the child to learn of any diseases or accidents which would confirm the suspicion of a mental defect manifested by the scholastic backwardness. He may or may not find anything conclusive. In this case, we will assume that a history of spasms, slowness in walking and talking, and later a blow on the head, are developed. The spasms ceased at three years of age and the blow was not severe enough to produce unconsciousness nor to leave a scar, however much impression it may have left upon the parents' memories.

The Family History.—Thereupon the clinician takes up the family history proper, at once the most important and the most delicate task in his preliminary inquiry. The story of early spasms in the child's personal history has prepared the examiner's mind for some neurosis in the family. By dint of questioning he uncovers a case of extreme "nervousness" in an aunt who was never in an insane asylum but was very "queer" in her talk and actions. This in turn is connected with possibly some erratic conduct and queer notions of a grandparent, though, as far as can be learned, nothing else significant appears. If insanity, epilepsy, or imbecility did appear in either parent of the boy, this, taken with his own mental retardation, would make the evidence of his incurability almost conclusive.

Individual and Social Capacities.—After the family history is learned, a series of questions are asked concern-

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ing the boy's individual and social capacities. They are similar in their intent to the pedagogical questions, but deal with more fundamental capacities, like the instincts and emotions. All of the questions are given below.

Case

GENERAL EXAMINATION

Made by

.

Date

Notes by

Name

Age

Address

PEDAGOGICAL HISTORY:

1. What is your name? (Child, parent.)
2. Why do you bring this child?
3. Did any one suggest that you come here?
4. Have you ever been here before?
5. How old is the child? Birthday?
6. Does he go to school? Kindergarten? Public?
Private? Parochial?
7. What grade is he in?
8. At what age did he start to school?
9. Does he get along well in school? In what branches?
10. Has he always been promoted? If not why? On
account of irregular attendance? Or in-
ability to learn? Or conduct?

PAST MEDICAL HISTORY:

11. Has he been ill since he started to school? With what diseases?
12. Before he started to school did he have any of the usual children's diseases? Measles? Chicken-pox? Mumps? Whooping-cough? Diphtheria? Scarlet fever? Meningitis? Marasmus? Any special troubles? Any falls? Injuries?

BABYHOOD:

13. When did he begin to walk?
14. When did he begin to talk?
15. When did the first tooth come?
16. When did he sit up?
17. Did he grasp toys? Go after toys?
18. Did he have any infant troubles? Summer complaint? Serious falls? Serious injuries? Convulsions? Spasms? Indigestion?

BIRTH:

19. Was he born naturally? At full time? With instruments? Was he a large baby? What was his weight at birth? Was he a "blue" baby? Did he cry immediately? Did he suckle immediately? Was he fed by bottle? On prepared food? Did he cry much during infancy? Did he sleep well? Did he get thin? Have you noticed any difference between him and your other children?

FAMILY HISTORY:

20. How many children have you? Were there any miscarriages?

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21. How many living? How many dead? With what did each die?
22. What is the age of each living child? Which child is this?
23. Are the other children doing well at school?
24. Are they all normal and healthy, physically and mentally?

MOTHER'S HISTORY:

25. Does this child look like his mother? Is the mother in good health now? Has she always been in good health? Was she so just before the birth of the child? At the time was she taking any medicine? Did a physician attend her for any illness just before this child's birth? Did she work? At home? Away from home? How old was she when this child was born? Did she at that time have any falls or injuries of any kind? Does she use intoxicants? Of what nationality is she? Where born?

Mother's Father:

26. Is the mother's father living? Of what did he die?
27. Was he a healthy, normal man? Did he always work? What did he do?
28. Were his brothers healthy, normal men? Sisters healthy and normal?

Mother's Mother:

29. Is the mother's mother living? If dead, of what did she die?
30. Was she always normal and healthy? How many children had she? Are all of them well and normal?

31. Are there any abnormalities whatever amongst mother's relatives?
32. Are this child's uncles and aunts normal?
33. Are this child's cousins normal?

FATHER'S HISTORY:

34. Does this child look like his father?
35. Is the father living?
36. How old is he? Has he always been healthy and normal?
37. What diseases has he had? Any injuries? Ever been in the hospital? Has he ever had any operations? Any running sores?
38. Does he drink intoxicants? Of what nationality is he? Where born?
39. What is his occupation? Does he work steadily? Why is he out of work? How much education has he had? In what grade of public school was he last?
40. Was he married before? Of what did his first wife die?

Father's Father:

41. Is the father's father living? If so, how old is he? If dead, of what did he die? Was he always normal and in good health? Did he work? Regularly? How long did he stop work before he died? Were his brothers normal, healthy men? Were his sisters normal and healthy?

Father's Mother:

42. Is father's mother living? How old is she? If dead, of what did she die? Was she always healthy and normal? How many children did she have? Are they all well and normal?

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43. Are there any abnormalities amongst the father's relatives? Are any dead? Of what did they die?

General Remarks.

I. PERSONAL CAPACITIES:

1. Can this child feed himself? Eat at the table? Handle a knife? fork? spoon? Eat what the rest of the family eats? Will he eat what is not food? Does he bolt his food? Is he a glutton?

Remarks:

2. Does he dress himself? Button clothes? lace shoes? tie shoe strings, etc.?

Remarks:

3. Does he wash his own face? comb hair? bathe himself? clean his teeth?

Remarks:

4. Does he attend to his wants by himself? Wet the bed? Soil his clothes during the day?

Remarks:

5. Can he walk? Is his gait normal? Energetic? Slow? Shuffling?

Remarks:

6. Other individual traits?

II. SOCIAL CAPACITIES:

1. Can he guard himself against common danger? Falls? Accidents? Burns? Can he go alone on the street?

Remarks:

2. Can he talk? In monosyllables only? Use sentences? Fluent? Talkative? Taciturn? Intelligent conversation? Mute? Make wants known by signs? Gestures? Stutter? Stammer (baby talk)? (Mark articulation defects on proper report blanks.) Verbigerate? Echolalia? Does he sing?

Remarks:

3. Is he sociable? Does he play with others? Same age? What games does he play?
- (a) Toys, hobby horses, locomotives, wagons, shovels, sand-piles, dolls, etc.
 - (b) Tag, hide-and-go-seek, cops and robbers, wooden guns, swords, knives, bows, marbles, ball, etc.
 - (c) Athletic contests, play on teams? Base ball, basket ball, etc.?
 - (d) Does he play any musical instruments? Sing?

III. MORAL CAPACITIES:

- 1. Is he obedient? Play truant? Lie? Smoke? Swear? Steal? Sexual vices?
- 2. Has he ever been suspended from school? Arrested? House of Detention? Reformatory?
- 3. Does he know right from wrong?
- 4. Does he attend Sunday School?
- 5. Describe minutely concrete instances of his immoral actions.

IV. INDUSTRIAL CAPACITIES:

- 1. Does he work? What does he do? Has he worked there long? How many positions has he had?
- 2. Can he tie knots? Thread needle? Sew? Knit?

3. Do housework? Wash dishes? Sweep? Cook?
Make beds? Can he be trusted to do these by himself?
4. Can he use tools? Saw? Hammer? Make wagons?
Kites, etc.?
5. Can he do errands? Go to store? Remember things
to be brought? Get right change?
6. What can he do best? What does he want to work
at when he grows up?

Remarks:

The Questions Explained.—The order of the questions has already been referred to and the reason for this order explained. Several other characteristics in the questions are to be noted. They are not merely formal; each has its purpose; each is expected directly or indirectly to elicit some information. They are worded, therefore, so as to be comprehended by the ordinary clinic visitor. Many of them are so phrased as to hide their real purpose and to secure admissions the meaning of which is unknown to the respondent but clear to the interrogator.

For example, the second query will reveal the class of deviates to which the child belongs, whether he is a mental or moral deviate, or both. With school children the innocent questions of age and school grade will elicit the necessary information as to pedagogical retardation. When this much is clear, the case is before the examiner and he then begins a search for causes. Questions 8, 9, 10 and 11 seek to locate the causes of backwardness, if it is present, in the child or in his environment. Question 12 examines his diseases; questions 13 to 19 seek more information into causes, and the remainder delve into the family history.

It is not expected that they will be slavishly adhered to, but are to be varied as occasion may demand. Since, however, the questions have been wrought out of actual experience, it will be frequently found that their form, as well as their order, has its value in performing a necessary and difficult task, viz.: eliciting necessary information from uncertain, halting and half-willing persons on a subject hard to discuss freely. Incidentally, they serve a double secondary purpose. They draw out the naturally taciturn, but tend to quench the voluble irrelevancy of the garrulous.

The Physical Examination.—After the oral examination has been completed a physical examination of the child is made by a medical attendant at the Psychological Clinic. The nature and purpose of this examination must be carefully considered.

First, it must be clearly understood that the physical examination, though usually made by a medical man and taking cognizance of all anatomical and physiological derangements, is in no wise a medical diagnosis. For that purpose the children are sent to physicians, specialists, or medical clinics.

The physical examination at the Psychological Clinic is definitely divided into two parts. The first is a complete anthropometric measurement of the child, together with a description of his general physical appearance, muscular coördination, gait, posture, and physical tone. The second part consists of an extensive medical examination, comprising, as far as circumstances will allow, a more or less minute scrutiny of all organs and all symptoms of physical derangement. This divides the physical examination into five parts. Part I is anthropometrical, static and dynamic; Part II is medical, local, constitutional,

and nervous. This arrangement is made primarily to facilitate clinic procedure by permitting one assistant to make the anthropometric measurement while the medical assistant may be working with another case. The examination blank used is appended for closer consideration.

PHYSICAL EXAMINATION

I. ANTHROPOMETRIC MEASUREMENTS:

A. *Static Measurements:*

1. General Appearance.
2. Posture.
3. Gait.
4. Height.
5. Weight.

- | | | |
|----------------------|---|---|
| 6. Head Measurements | { | Girth.
Bi-parietal.
Occipital—frontal.
Occipital—mental. |
|----------------------|---|---|

7. Cephalic Index.

8. Stigmata and Abnormalities:

Skin: Rough, smooth, clean, pediculi.

Hair: Rough, smooth, soft, bristly, color, sparse, thick, low-growing.

Head: Rachitic, dolicocephalic, brachycephalic, microcephalic, hydrocephalic, scars, protuberances.

Forehead Receding, low, high, narrow.

Ears: Small, large, infantile, pointed, Darwinian, tubercle, lobe, helix, antihelix.

Nose: Bridge, alæ, nares.

Throat: Tonsils, hypertrophic, atrophic, submerged.

Teeth: Irregular, Hutchinson, pegged, tartar, caries, lacking.

Palate: High, narrow, broad.

Tongue: Color, coating, fissures.

Glands: Cervical, salivary.

Eyes: Color, infantile, large, small, narrow-set, broad-set, epicanthus.

Trunk and Limbs: Scoliosis $\left\{ \begin{array}{l} \text{right} \\ \text{left} \end{array} \right\} \left\{ \begin{array}{l} \text{cervical.} \\ \text{dorsal.} \\ \text{lumbar.} \end{array} \right.$

Lordosis $\left\{ \begin{array}{l} \text{right} \\ \text{left} \end{array} \right\} \left\{ \begin{array}{l} \text{cervical.} \\ \text{dorsal.} \\ \text{lumbar.} \end{array} \right.$

Shoulder Blades: Prominent.

Hands: Moist, dry, cyanosed.

Feet: Flat, clubbed.

B. Dynamic Measurements:

1. Chest Expansion: $\left\{ \begin{array}{l} \text{upper.} \\ \text{lower.} \end{array} \right.$

2. Dynamometer: $\left\{ \begin{array}{l} \text{left hand.} \\ \text{right hand.} \end{array} \right.$

3. Ergograph: $\left\{ \begin{array}{l} \text{left hand.} \\ \text{right hand.} \end{array} \right.$

4. Vital Capacity or Coefficient = R. H. C. $\times$ O S. H. C.

II. MEDICAL EXAMINATION:

A. Local:

1. Heart: $\left\{ \begin{array}{l} \text{Irregular.} \\ \text{Intermittent.} \\ \text{Murmurs.} \end{array} \right.$

2. Lungs: { Inspiratory sound.
Expiratory sound.
3. Stomach: { Normal.
Distended.
Ptosis.
4. Intestines: { Normal.
Distended.
Meteorism.
5. Liver: { Normal.
Enlarged.
Atrophy.
6. Kidneys: { Normal.
Ptosis.
7. Bladder: Incontinence.
8. Genitalia: { Circumcision needed.
Hymen intact.
Hymen ruptured.
9. Vision: { Myopia.
Hyperopia.
Strabismus.
10. Audition: { Watch test.
Whisper test.
Audiometer.

B. Constitutional or Diathetic:

Anæmia.
Rheumatism.
Syphilitic.
Chlorose.
Rachitic.
Tubercular.

C. Nervous Diseases:

Chorea.

Convulsions.

Epilepsy.

Hysteria.

Insanity.

Meningitis.

Myelitis.

Paralyses.

The purpose of the physical examination in a mental diagnosis is not to discover anatomical or physiological causes of mental deficiency. We have carefully avoided that conception for several reasons. First, the assumption of a physical cause, for example, a cerebral lesion, for every case of mental deficiency, is, to say the least, unnecessary. It does not assist in the solution, but adds another confusing factor as difficult to discover or to infer as is the mental defect for the explanation of which it is invoked. Secondly, it involves an assumption of a causal nexus between the physical and the psychical, which is by no means universally admitted.

That there is a relation of some kind no one pretends to deny. And this relation, which is the foundation of all physiological-psychology, not only justifies but makes indispensable in every classification of mental or moral deviation a physical examination of the most complete kind possible. It is not, however, a relation that would justify the psychologist in bending all his efforts toward locating a cerebral defect and then arguing from the brain defect that an incurable mental aberration is consequently present.

As has already been said, cerebral defects are too obscure

and too difficult to discover to be diagnosed by the psychologist. The only persons equipped at the present time to do this are the specialists in neurology. And it is for this purpose of deciding whether the child must be referred to a specialist that the physical examination is made.

Two Kinds of Physical Defects.—The psychologist also seeks to corroborate his suspicion of mental deficiency founded upon the oral examination into the personal and family history of the child and to secure new evidence *pro* and *con* by seeking for two kinds of physical defects in the child. The defects of one class are by their very nature patently removable. Those of the other class are congenital and irremovable and are commonly called stigmata of degeneration. The first may in no wise affect brain structure or brain development, but they may be sources of constant irritation and hence play a most important part in retardation by giving rise to flighty attention, as frequently happens in cases of hypertrophied adenoids, or unruly behavior, as sometimes happens in cases of impacted dentition. They may therefore explain any particular case of pedagogical retardation like the one we are supposed to be examining. Dull hearing, poor vision, hypertrophied faucial and pharyngeal tonsils, irregular, non-occluding, decaying teeth,—one or all of these apparently simple physical defects may, and frequently do, produce a clinical picture of mental deviation impossible to distinguish from the clinical pictures of incurable mental deficiency by physical or mental tests.

If the clinician is presented with such a case two courses are open to him. He may fall back upon the personal or family history already obtained, and be determined in

his judgment by the presence or absence there of any marked psycho-neurosis; or, though the mental tests may not be given, further judgment as to the child's mentality may be suspended until he is put in the best possible physical condition. This may require a simple surgical operation as in adenoid growths, or a long course of medical treatment as in congenital syphilis, or a course of constitutional treatment, possibly in the country or at the seashore, as in instances of neglect, malnutrition, or incipient tuberculosis.

The temporary defects having been removed, their effect upon the child can be ascertained. Before they are removed, they must be noted and their effect allowed for. While they are present it is impossible to determine with absolute certainty whether the deviation is due to them or to some other factors. The diagnostician must therefore proceed by a process of exclusion.

Relation of Curable Defects to Retardation.—On the other hand, the case may present a number of curable physical defects without any other signs of amentia. When these are present, without any other manifestations of amentia, they may be taken as almost decisive in marking temporary and curable retardation. In order that the student may have a fair notion of the kinds of such defects and their relation the results of some investigations are here given.

Diseases of the eyes and ears have been popularly considered as immediate and certain obstacles to the acquisition of knowledge by ordinary school methods. In a less degree than eye and ear defects, and usually more remotely, pharyngeal and nasal affections, dental caries and tartar, anemia, malnutrition, indigestion and other intestinal troubles have all been alleged as causes of delay in

mental progress. Limited statistical inquiry into the relations of the physical condition of children to mentality do not wholly substantiate these general views. A partial summary of results taken from various sources in America is given by Mr. Ayres, in his "Laggards in Our Schools," Chapter XI. We will give a synopsis of results obtained in three cities, Philadelphia, Camden and New York. A limited investigation was made into the conditions of special classes in Philadelphia by Dr. Cornell, who writes: "The results showed that in each school, *and in each individual branch of study in each school*, the healthy or normal children stood higher in their classes than the average children, and the physical defectives, taken as a class, stood lower than the average children."² However, as the difference between the general average obtained by the normal children and the general average of the defective children was only three per cent., the investigation proved that while physical defectiveness is assuredly a cause, it cannot be said to be the main cause for retardation in school progress.

Dr. Newmayer, of the same city, classified the exempt and non-exempt among 5005 children in the regular schools. In these lists the defectives were almost evenly divided between the exempt and the non-exempt, with two exceptions. These exceptions comprised the mentally defective and those suffering from skin diseases, both of which contributed largely to the non-exempt. "That the former should be more common among them is of course to be expected. That they should be found to be affected more commonly with skin disease is probably rather to be considered a reflection of poorer home con-

² Walter S. Cornell, Physical Defects of School Children, *The Psychological Clinic*, vol. i, No. 8, Jan. 15, 1908, p. 232.



A cast of a child's jaw malformed so that the front teeth do not come together.



The V-shaped upper jaw which so often accompanies adenoid growths.

ditions than having a direct connection with their mental aptitudes.”³

“During 1906, Superintendent of Public Schools, James E. Bryan, conducted extensive investigations in the schools of Camden, New Jersey. In all 10,130 children were given physical examination. Of these children 8100 were of normal age and 2020 retarded.”⁴

The results of the vision and hearing tests showed such slight differences in the two classes that they made one hesitate to draw any conclusions as to any relation between retardation and defective vision or hearing. “Among the children studied 1852 had failed of promotion and these children were given still further examinations. Among them 1279 were of normal age and 573 were retarded.”⁵ A tabulation of the results gave the surprising information that the children of normal age showed a higher percentage of defective vision and hearing than did the retarded ones.

Bryan's
Records

To study the causes of retardation still further investigation was made to determine why 2020 children were over age for their grades. The physical defects most common, other than defective sight and hearing, accounted for 3.9 per cent. of the number, and ill-health for 9.6 per cent. more. The other causes were either environmental or mental.

The New York City investigation covered 20,000 children, of whom 7608 had been physically examined before. Of the latter, 6084 fell within the normal age and 1524 were above normal age. The surprising result was found in the fact that 80 per cent. of the normal and only 75 per cent. of the backward children

New York
Records

³ Laggards in Our Schools, Leonard P. Ayres, 1909, p. 119.

⁴ Ibid.

⁵ Ibid.

suffered from physical defects. Further study, however, revealed that the decrease of defects, except those of vision, kept pace with advancing age from six to fifteen years.

"This is true whether they are behind their grades or well kept up in their studies. Therefore, it is not surprising that we find that 80 per cent. of all children of normal age have physical defects more or less serious, while only 75 per cent. of the retarded children are found to be defective. This does not mean that pupils with more physical defects are brighter mentally. It simply means that retarded children are older, and that older pupils, as has been shown, have fewer defects." ⁶

Conclusions.—"What then shall we conclude in regard to the relation between physical defects and school progress in the light of the different investigations which have been discussed? We have seen that in the two Philadelphia examinations the percentages of defectiveness among 'exempt' and 'non-exempt' children are very similar. The Camden investigation showed very little difference as regards vision and hearing between retarded children and those of normal age.

"The New York examination shows that the retarded children have on the whole fewer defects than those of normal age, but it goes further than this. It establishes the important principle that except in the cases of vision older children have fewer defects, and it shows that when children who are badly retarded are compared with normal children and very bright children in the same age groups, so that the diminishing of defects through advancing age does not enter as a factor, the children rated as 'dull' are found to have higher percentages of each sort

⁶ Laggards in Our Schools, Leonard P. Ayres, 1909, p. 123.

of defect than the normal and bright children. Here again defective vision must be expected.

"Moreover, the New York investigation gives us quantitative measures of the retarding forces of the different kinds of defects. In general, children suffering from physical defects are found to make 8.8 per cent. less progress than do children having no physical defects. Children suffering from enlarged glands and adenoids are retarded most. Hypertrophied tonsils, defective breathing and defective teeth are in general somewhat less serious in their effects. No statistical correlation is shown between slow progress and defective vision.

"All of these considerations are of the first importance in the problem of retardation. That there is a distinct correlation between physical defectiveness and school progress has been shown. The quantitative measure of the retarding force shows that it is only one of the factors contributing to bring about the serious degree of retardation which exists in our public schools.

"In studying the problems of school progress and physical defects we must not forget that school success is to only a limited extent a true measure of real ability. It may often be but an indication of adaptability and docility. Indeed, it would not be surprising to find that the child of perfect physical soundness and exuberant health had so many outside interests as to render him not particularly successful in school work, and that he found the rigid discipline of the school-room so irksome as to cause him to fail of approbation by his teachers.

"Where the personal equation is so important and methods and standards so little established as in the field of medical inspection, the greatest caution must be exer-

cised in drawing sweeping conclusions from the figures furnished. We have shown:

“ 1. That physical defects decrease with age; that age
 Summary is the important factor and must be taken into
 consideration in all investigations dealing with
 defectiveness and school progress.

“ 2. It has been shown that vision does not follow the
 same rules as do the other defects.

“ 3. The examinations conducted in New York have
 shown higher percentages of enlarged glands, defective
 breathing, hypertrophied tonsils and adenoids among the
 dull children than among the bright children.

“ 4. It has been demonstrated that physical defective-
 ness has a distinct and important bearing on the progress
 of children.”⁷

The Evidence of the Clinic.—Supplementary to the
 somewhat restricted evidence of these necessarily more
 or less hasty examinations of masses of children comes
 the cumulative evidence furnished by the painstaking and
 complete diagnosis of psychological clinics. Thus far,
 the testimony so gathered points to a much more signifi-
 cant connection between retardation and physical defects.
 A number of cases will be cited in later chapters in which
 medical or surgical relief was followed by marked and
 almost immediately increased ability to make progress in
 school. To this was added the testimony of parents to a
 generally increased mental capacity. In one group
 thirteen troublesome adolescent boys, composing a special
 class conducted by the Psychological Clinic, every one of
 the pupils required and received medical attention within
 the half year previous to the close of the special term of

⁷ Laggards in Our Schools, Leonard P. Ayres, 1909, pp. 128-131.

six weeks, and all of them were reported as showing improvement in mental ability and conduct.⁸ By such experimentation, by daily, careful, complete examinations and tabulation of results observed either in a hospital school or by the social workers, the Psychological Clinic is contributing its quota to the solution of this vexing and urgent pedagogical problem of relationship between the physical and the psychical in backward children.

As has been suggested above, the peculiar value of the contribution made by the clinic lies in its method as compared with that of ordinary medical inspection. Great good is being done by the latter method. Results already obtained have more than justified the further extension of the system as a necessary and integral part of the school organization. But, by the very nature of the case, because of the necessity of dealing with large numbers of children, of making examinations in school-rooms or other places unfitted for observation of defects, because of the impracticability of making any thorough inspection of important organs closely concerned in mental and moral aberrations, as well as the fruitlessness of hoping that medical inspectors will ever become specialists in children's diseases, medical inspection in public schools cannot, for a long time at least, do more than discover the striking instances of physical defects. Under the present circumstances, even this is not always accomplished, as is shown by comparing medical inspection cards obtained by some children at school with reports of the same children after an examination at the clinic. Total deafness in one ear has been overlooked by a good inspector. Impacted and retarded dentition is most difficult

Clinical and
Medical
Inspection

⁸ A Pedagogical Experiment with Troublesome Adolescent Boys, *The Psychological Clinic*, vol. iv, No. 6, Nov. 15, 1910.

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of discovery by casual inspection and is frequently unnoticed. As an example of discrepancies,—fortunately not very frequent,—between medical inspection in school and in a psychological clinic the following parallel is an extreme though an actual case:

MEDICAL INSPECTION CARD, YEAR ENDING JUNE, 1909.

Eye.	Ear Normal.	Throat Normal.	Nose Normal.	Skin Normal.	Orthopedic Normal.
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CLINIC REPORT, NOVEMBER 15, 1910.

Subnormal.	Hearing diminished, especially right ear.	Mouth breathing indicates adenoids; tonsils enlarged.	Nasal or pharyngeal obstruction.	Normal.	Requires medical examination and urine analysis. Heart irregular and somewhat rapid. Teeth very irregular, decayed, some missing.
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RECOMMENDED.—That nose, throat, ears, eyes, and teeth be examined by specialists; that a general medical examination be made, including a test of urine.

The lapse of time between the two examinations is certainly an extenuating circumstance, but is hardly sufficient to account for all the discrepancies. Some of them are undeniably due to differences in method and thoroughness of diagnosis. This case, as well as others more or less similar, tends to show the strong advisability of having some institution ready to supplement the work of the school examiner both in making more detailed examinations and in following up the cases. This service the clinic is well equipped to perform. When awakening interest and growing intelligence have taken adequate cognizance of the need, no first-class city school system will be considered complete without its psychological

clinic, just as now it is not complete without its medical inspectors.

The Discovery of Incurable Physical Defects.—When the physical examination has taken full account of the removable physical defects just described, the study of the stigmata of degeneration still remains. Something has already been said in a previous chapter regarding the relative non-importance of these signs unless they are found in conjunction with other evidences of mental defect or in such numbers and degree of abnormality that their significance is beyond dispute. As far as we have gone with our supposed case of the boy, the evidence from the stigmata can be corroborated only by his personal pedagogical and family history. These facts must be elicited from the parents by personal questioning, but the physical traits are subject to inspection. What both of these facts are and how they confirm each other may be best understood from a description of the typical sub-normal child, first, in general character and appearance, and then in greater detail by noting the peculiarities of each organ of the body. It is important to make the classification as early as possible in the child's life, and since, if it is not made at an early age, the personal history must be carefully considered, we will begin with infancy.⁹

First, with regard to temperament or disposition, mentally deficient children may be divided into the excitable and the apathetic. Care must be taken here not to confuse the activity of the excitable class with superior mentality. The apathetic child may be as educable and as able to

⁹For fuller description of the physical characteristics of imbeciles see *Mental Defectives*, Martin W. Barr, 1904, Chap. V; and *Feeble-mindedness in Children of School Age*, C. Paget Lapage, 1911, Chap. II.

learn as the excitable, but nearly always the inexperienced observer will give the latter more credit than the former, on the principle that a person who does something is brighter than one who does nothing.

The feeble-minded baby may be extremely quiet, therefore, with prolonged periods of slumber, lying passively in any position in which it is laid down, with almost no attempt to move its hands or feet, or its eyes. Such a baby is in special danger of neglect regarding its mental condition, for it is pretty certain to be called a "good baby" and the mother is able to "get so much done" on account of its abnormal quietness. Later on, when walking time comes, the unfounded complacency of the parents will turn to dismay as they see months, and sometimes even years, come and go without their child making any attempt to take his first step. Even under such circumstances, the strange fatuity of fond parents, sometimes abetted by the family physician, will predict that their child will "outgrow" his present dulness and "brighten up" later on, possibly when he is seven years old; or if not then, when he is fourteen; or if that birthday comes without bringing improvement, when he is twenty-one! If such hoping against hope were not born of the best in human nature it would deserve unmeasured condemnation. As things are, it must be condoned as ignorance for which possibly others are more to blame than the parents.

The very opposite to the apathetic baby is the excitable. Here all is agitation,—constant activity in uncoördinated, purposeless, jerky motions. This is the typical "cross baby," fretful, peevish, nervous to an unexplainable degree, always irritable and crying without cause and refusing to be pacified. Hardly has it been put to sleep with great

effort and much rocking before it is again awake and fretting. Even in sleep it does not rest quietly, but jerks about with fitful choreic movements. Such a child is more fortunate in one respect than its more placid brother. It draws attention and its peculiarities demand investigation. Relatives and friends are questioned; the family physician is consulted concerning it; sometimes specialists are brought in. Unfortunately, too little information is usually given and often the simple report is made that the baby is "just a crying baby" and the soothing formula of "it-will-outgrow-it" silences the parents' fears, until backwardness in doing the simple things of life awakens them to an appreciation that something is radically wrong.

In both classes of children slowness is the first sign of mental trouble. It probably arises from the generally flaccid and incoördinated muscular system, a marked symptom which persists during the whole life and enters into every effort from the first crude attempts at sucking,—ineffectual because of inability to close the lips over the bottle or nipple,—through incontinence of urine, slavering, with hanging lower lip and hyperæmic salivary glands, faltering attempts at walking and continued shuffling gait, up to the adult's fumbling attempts to perform the acts of any manual occupation. Muscular tone, muscular precision, coördination, "snap," vigor, dexterity—all the little knacks which come so naturally to the normal child from the very first attempt to reach for the light, are wanting in the defective.

When babyhood is passed and childhood begins with the first words, first steps, and first teeth, other symptoms begin to make their appearance. The hearing is often imperfect, as is manifested in inattention to commands or spoken discourse and the sounds which would attract the child of

normal audition. On this account, speech is delayed and when words are finally acquired they are so inarticulate that nobody understands what is said except those familiar with the child. This is the case long after the normal child is talking clearly. Speech, indeed, is one of the best indications of the degree of mentality. The natural child begins to talk between nine or ten months and sixteen months of age. Sometimes talking may be slowly acquired and putting words together with any meaning may be delayed until eighteen months or two years. This, however, should cause apprehension, and if, after an examination by a specialist, no abnormality is found in the vocal organs, grave consideration should be given to the case. If speech is not begun by the seventh year, with no organic defect to account for it, such as some acute illness, malnutrition, or malformation of vocal organs, mental deficiency is almost certain to be the cause. In that case, training in talking is of no avail; the child does not talk because it has nothing to express.

Next to speaking in symptomatic importance comes walking. Even after the natural inertia of the defective has been overcome by a budding interest in things about him and a desire to imitate other children in moving about, the muscular incoördination which underlies all his activities gives him a slouchy, staggering gait with body bent forward and hands falteringly extended like a decrepit old man. There is a curious atavistic return to the ape-attitude in both standing and walking. The body is bent forward at the hips, the knees are also bent, the hands swing low and the shoulders droop forward. In movement the feet are dragged, the step is slow, running is an art of late acquirement and performed only with constant fear of falling; steps are climbed one at a time, games are

only half entered into, and there is usually a general appearance of weariness unnatural to boisterous childhood. When the defective is excited, and more commonly in the case of the excitable type, a nervous flightiness with a disposition to wander aimlessly from one thing to another exhibits itself.

Play.—In play, the best and truest expression of all there is in childhood, the weak-minded unfortunate shows his preference for mates much younger than himself. With them he feels somewhat at home. With those of his own age he is hopelessly handicapped and becomes either the petty servant of his comrades or else the butt and sport of the unfeeling ones. Oftentimes his play with others is made up largely of meaningless chatter and silly laughter, with peculiar, excitable movements, like jumping up and down, screaming at intervals, waving his arms and making grimaces. If he cannot take refuge with younger children he may fall into a sullen indifference to his surroundings and express an aversion to companionship of any kind.

Fatigue.—In attempting to learn anything new, whether it be a game or a lesson or the simple acts of dressing, washing or combing his hair, he very quickly gives evidence of fatigue. He is prone to give up and to turn his flighty attention to something else. If he is restrained from wandering and compelled to fix his mind upon the task in hand, further fatigue symptoms appear in nervously moving hands, in jerky, foolish little motions, redness of cheeks, brightness of eyes, followed, if further pressure is brought to bear, by a tremulous excitement which communicates itself to nearly the whole body and ends with tears and sobbing and complete inability to do anything whatever. To push a child to such an extreme is an act of folly in parent or teacher impossible to criticise too severely.

Yet it is often done under the blindly ignorant notion that the child can if he will, or that he is lazy, because the uninformed adult measures the child's powers by that of a normal child and does not understand that this very inability to stick to a task is a sure token of mental deficiency.

Inattention.—If idiots of any grade could only pay attention, and pay attention long enough, they could learn anything as well, if not as fast, as one with a brilliant mind. Attention, however, is the adjustment of some organ of sense—usually the eyes—to some stimulus or upon some point of interest, and depends upon the ability to coördinate and keep certain muscles at a certain tension. This, as has already been said, is a fundamental defect of the weak-minded. Therefore, fatigue, as manifested in flightiness of attention, is a marked and usual characteristic of the class. In early childhood it shows itself in complete indifference to the toys which are ordinarily objects of intense desire to a normal child. The healthy baby will strain and grasp and kick to get at some bright colored object held before its eyes. The little child will run after any new object rolled or thrown before it. Curiosity prompts attention and attention prompts ready and vigorous movement toward the interesting toy. Not so with the defective. Stolid indifference is the reward of any one who tries to interest him with the brightest, newest, shiniest toy. If the ball is rolled before him, he stares with blank or inquiring face, but does not make any effort to follow it. Only by the most persistent and painstaking devices is attention aroused, to be held for only a moment, before some other equally stimulating thing attracts, fatigue sets in, or stolid indifference again closes down like a pall upon the momentarily lighted face.

Imitation.—Under such circumstances it is not surprising to find that imitation is at first almost wholly absent, and, later on in childhood, at the school-age, it is but lame and feeble in comparison with the ready mimicry of the vigorous boy or girl. In a family with many other children, the commonest acts of everyday life must be laboriously taught the defective instead of being spontaneously imitated. Learning to dress costs as much time and labor as a normal child spends in learning to write. And so with other daily duties. Washing the face and hands, combing the hair, putting on shoes, tying strings or ribbons, or any one of the thousand and one simple acts learned unconsciously by the rest of the family are sources of endless worry and much practice to these helpless ones.

These are the general characteristics of the defectives. They are open to inspection by any eye and can be watched daily in the home or in the school. No special skill is required in their observation. Their significance must be understood and it must not be asserted that their causes reside in the mere unwillingness of the afflicted one. They must be treated as symptoms having a sinister meaning for the future mental accomplishments of their possessor, to be overcome by the most patient, skilful and persistent training by teachers fitted by nature and experience for the delicate task.

Particular Stigmata Alone are not Conclusive Evidence of Amentia.—Passing now from these general characteristics to a little closer scrutiny of the various organs of the defective child, we will see how they may differ in a typical case from those of a normal human being. In the study of congenital physical abnormalities or stigmata, it must be remembered that probably no one case will present *all* the signs of degeneration. Neither,

on the other hand, should any person be adjudged subnormal because of the presence of one or many of the degenerative marks. In fact, it would be almost a perfect specimen of the human race who could submit to a minute inspection and escape without a mark against him. At present there is a distinct reaction against the theories of Lombroso and his school, who taught, but a short time ago, that the mentality and moral character of men could be read from their bodily idiosyncrasies as from the pages of a book. Later investigations by Dr. Travis¹⁰ and others tend to modify the extreme views of the stigmatic school and to place less emphasis upon the shape and size of craniums, position and development of ears, eyes, nose, hands and other organs. A man with silky curly hair and delicate tapering fingers may have a few qualifications for the career of a successful pickpocket, but it would assuredly be preposterous to arrest every such man because of these misfortunes of birth.

In fact, it is safe to say that physical signs of degeneration, taken by themselves, are most untrustworthy evidence upon which to base predictions of intellectual or moral accomplishments. Taken in consideration, for example, with conduct or character as revealed in a long series of actions all tending toward increasing retardation in any child who is falling farther and farther behind his companions in school-grades, stigmata have a considerable weight in deciding the causes of such tendencies of conduct. A microcephalic skull, *i.e.*, one smaller in birth than the average, in itself signifies nothing regarding mental endowment. Men with such reduced brain spaces are found in professors' chairs

Stigmata
Should not
be Taken
Alone

¹⁰ The Young Malefactor, Thomas Travis. New York, T. Y. Crowell & Co., 1908.



A hydrocephalic imbecille. Low grade. The scar on his temple is from a large burn. He cannot walk, talks but is, and is a constant cure.



Middle-grade imbecille; much improved since his entrance in an institution.

as well as in asylums for demented. Only when the small head is found upon the shoulders of a person with a record for extreme slowness, distinct inability to perform certain common mental tasks, like arithmetic, or with a record of persistent and uncalled-for criminal acts, does it mean such.

The Shape of the Skull.—With these words of warning, we will mention a few points to be especially noted in the examination of a backward child for incurable mental deficiency. The shape of the skull is a prominent characteristic in many typical cases of imbecility. It may be too small in girth measured just above the eyes and ears, as compared with the height, weight, and age of the child. For the average girth, or standard, the “Manual of Physical Measurements,” by William W. Hastings, published in 1902 by the Y. M. C. A. Training School at Springfield, Mass., or similar tables may be consulted, though it must be remembered that a slight deviation in this one dimension is not critical and that real microcephalic imbecility is usually characterized by a head not only small but also sloping suddenly in a nearly perpendicular line to the neck, thus giving a somewhat flattened occiput. From above, such a head presents a beautiful oval, with its widest portion about over the ears and narrowing toward the forehead.

Opposite to the microcephalic is the hydrocephalic skull, or the one with “water on the brain.” Here again it is to be remembered that not all hydrocephalics are feeble-minded. When the condition is found with feeble-minded conduct it argues decisively that the fluid which has collected in the brain-cavities called ventricles, or between the brain coverings called meninges, has also brought about degenerative changes in the organ

itself. This may be due to pressure from within which has caused the skull to bulge over the ears, and especially over the eyes, until, in extreme cases, the patient becomes so top-heavy he is unable to walk. In milder cases, the bulging shape of the cranium and abnormal girth, measured with the tape-line, will usually fix the source of the trouble.

It might be noted, as a matter of passing interest, that the "pressure on the brain," so often referred to by those unacquainted with the true causes of idiocy, is almost always alleged for the explanation of dulness in the microcephalic child, but almost never in the case of the hydrocephalic. The opposite, if anything, is true. If there is any abnormal pressure at all upon the brain, it occurs with the big-headed and not with the little-headed sufferers. In neither case is there any severe pressure, for it is a law of growth that hard structures will conform themselves to softer parts of the same organism.

Beside these two common sizes and shapes in skull formation, another must be placed, probably met with more frequently but possibly not so often accompanied with mental aberration. It is called the "box-shaped" or the rachitic skull, because it indicates the presence of rickets in babyhood, or at least some severe fault of nutrition. The skull is brachycephalic, short and broad, with a wide, flat forehead, two rounded corners, one above each eye, two more corners at the occipito-parietal points and a flattened occipital surface, or with the relatively large dorsal protuberance which seems to be plastered upon an otherwise flat surface.

The "box-shaped" skull does not indicate mental deficiency because of the malformed brain underneath, but because of the malnutrition, marasmus or rickets suffered at one time by the possessor of such a head and

the consequent non-development of nerve centres along with general retardation of all parts of the body. A box-shaped skull, therefore, usually accompanies a lack of all-round physical growth, undersize, under-weight, deformed ribs bent at the sternum into the so-called "rosary," Hutchinson's groove, enlarged epiphyses and lowered general physical tone. If such symptoms have been largely overcome by later feeding and care, the brain has usually developed correspondingly.

Rachitic
Skull

The Ear.—The study of defective ears alone would make a volume. One specialist enumerated thirty-eight distinctive stigmata of the auditory organ which betrayed lowered mentality in varying degrees. Such minute study of degenerate marks from a scientific point of view alone is always open to question, and for the clinician has no practical value. The grosser and more striking variations from type exhibited in the size, shape, position and development of the ears in any suspected case of degeneracy have some significance and should be given their due proportion of weight in the final decision regarding the mental status of their possessor.

The ear, taken as a whole, may be deformed,—large, twisted, or rudimentary. The lobules are special sources of defect, being rudimentary, absent or adherent. The pinnae, the helices and the anti-helices are often faulty and undeveloped. Darwinian tubercles—small cartilaginous nodules—may be present, sometimes several on the helix of each ear, but are no more frequent in the mentally defective than in normal people. The position of the ear, looking at the head upon the lateral aspect, frequently appears to be farther back than it should be. This often arises from the fact that the skull is flattened in the occipital region, as in the cases of microcephaly and rickets.

After the ears, probably comes the nose in diagnostic importance. Its shape and development are of especial significance. The commonest structural abnormalities are those associated with adenoids. Where adenoids are present the nose widens and thickens without any marked depression of the bridge, while at the same time the alae seem to cease their growth and remain infantile, without clean, clear-cut chiselling. This gives a "baby" appearance to the whole nose. In distinction from the ordinary adenoid nose, the nose of the feeble-minded is usually flattened at the bridge, broad at the nostrils, with wide alae, the whole appearance being coarse and undeveloped.

The Mouth.—In general, the mouth belongs to one of two types: the lips are either thick and coarse, or thin and immobile. The palate is misshapen, high-arched, keel-shaped, and V-shaped. Frequently the gums are much swollen and spongy. The tongue is either pointed, or thick, fissured and rough. The teeth are frequently decayed, irregular, and oftentimes the normal number do not appear. In the case of amentia due to syphilis, the teeth present the peculiar peg-shape and notched forms, sometimes with the characteristic Hutchinson's notchings. In the lower grades of mentally deficient children sialorrhea or drooling is very common. The corners of the mouth are frequently sore.

The Hands.—The hands are powerless; the prehension is almost always very feeble; the fingers are thick, clubbed, and the nails brittle, rough, and corrugated. Coördination is extremely undeveloped and manual skill very difficult to acquire.

The Skin.—Probably one of the first signs of degeneracy noticeable upon the presentation of a feeble-minded child at the clinic is the general condition of the skin. Without



The hands and webbed fingers of a Mongoloid idiot boy.



The hands of an imbecile boy, typical in his physical appearance, eighteen years old, unable to read or write, but can talk in simple words and sentences.

particular attention and with only a casual glance, even the uninitiated observer recognizes some peculiarity about it. The integument is usually coarse and flabby; there is a proneness to eczema, rupia, and other cutaneous diseases in general. Oftentimes, there is a peculiar pungent odor coming from the skin not due wholly to lack of bathing. Vegetable and animal parasites find a congenial soil in the skin of degenerates and will sometimes find permanent abiding places upon the body of the feeble-minded child when they will either not attack or will be speedily eliminated from his normal brothers and sisters in the family.

The Further Sub-classification of Aments.—The above description of the various organs and their stigmata will serve to distinguish mental deficiency in general. When this condition is classified, however, the work has just begun. The next process is to decide the particular group to which the dement belongs. While there are many degrees of amentia and the extremes of the highest and the lowest mentality stand out with marked vividness and distinctness, yet the degrees merge into one another in stages so slightly separated from those above or below that the demarcations are exceedingly hard to discern. In other words, the gradations between profound idiocy and high-grade imbecile are not steps or stages, but, if graphically indicated, should be shown with a curve without breaks. In nature, mentally defective children are not graded. Therefore any classification that is made must be looked upon as artificial, and to some extent arbitrary.

The Importance of Sub-classification.—Although this is true, it must not be thought that classification is merely theoretical or academical, and without practical

value. It is extremely necessary to classify a child in order to give him the proper kind of training. For the methods of training, if not the principles, change with degrees of degeneracy. Thus a high-grade imbecile should be educated by methods different and far more rapid than those applicable to a low-grade imbecile.

More than this, the ultimate limit to which the training can be carried and the intellectual results which will accrue to the subject from it are wholly predicable from the degree of mental deficiency diagnosed. It is of supreme practical importance also, where the problem of cost and the length of time possible to devote to training are final for deciding what shall be done with any particular child. Theoretically, of course, and under ideal conditions where provision is made for every defective, such practical consideration as the last would not be important, but under the present conditions they often become decisive.

The Idiots.—With these few words of introduction we will give a few indications of the different stages of idiocy, idio-imbecility and imbecility, following the educational classification already laid down by Dr. Barr. We will begin with idiocy, since that type is marked in its symptoms and comparatively simple and easy of diagnosis, and then proceed to the higher stages. Idiocy is sub-classified as profound and superficial. With the profound idiot, with the apathetic disposition, there is no speech, no sound, no movement, and as Dr. Barr sums it up he is "just a breathing mass of helplessness." The excited idiot, on the other hand, may utter bleating cries with constant movements such as rolling the head and twisting the body and making rhythmic motions of his eyes or his fingers. These characteristics are sufficient to mark this stage; one, happily, with which the public very seldom comes in contact.

Just above the profound idiot comes the superficial. In the case of the apathetic kind, mutism is the rule. Wants are made known by signs, or by inarticulate cries. Often the limbs are wholly or partially paralyzed and the extremities are cold and livid. Whenever the idiot is able to walk his steps are those of tottering infancy. Usually he sits all day in idleness dribbling saliva or blowing bubbles from his mouth, taking very little if any notice of things going on about him.

Superficial
Idiot

His excitable brother is an imp of mischief with a violent temper, wilful, restless, and always in motion; curious to a degree, testing everything with his fingers and tongue and swallowing everything that he can get into his mouth, including stones, rags, sticks, and refuse of every description. His speech is delayed for many years and when finally acquired consists of nothing more than broken sentences of monosyllabic words, accompanied by harsh, inhuman cries and gestures. His gait is an unsteady shuffle with a dragging, halting step, knees "jack-knifed" and body bent forward, reminding one of the posture of an ape.

The Idio-Imbeciles.—Above the idiot and below the imbeciles come the idio-imbeciles. They share the physical characteristics and habits of the idiot with something of the limitations of the imbecile. Again the dragging, faulty step and lurching gait are met, though much improved over the idiot's. Clumsiness is one of their marked characteristics and exhibits itself because of increased muscular power which is yet uncoördinated. Their speech is also limited and they make free use of signs, oftentimes accompanied with a senseless chatter and silly laughter. The silly humor often changes into sudden and unprovoked anger. The skin is coarse and often peels off in large flakes. Poor circulation is accompanied by sores, ulcers, chilblains, and frost-bites.

The Imbeciles.—Passing to the class of imbeciles beginning with those of low grade, we find the stigmata are still marked. Speech is usually present but articulation is defective; the vocabulary is limited and meaningless chatter very common. Reading and writing are difficult and almost impossible to acquire. Often the simplest and most ordinary occupations of making a living under direction require all the ability of a person of this grade, and beyond this he will probably never proceed. His life, therefore, should be spent in a colony doing under the most careful supervision those things for which he is best fitted.

One remove above him is the middle-grade imbecile. Here we begin to note for the first time an approximation

Middle-Grade Imbecile to the normal, a mentality more human than animal. In comparison with the other grades below, the middle-grade imbecile is mild and equable in temper. He readily accepts offered suggestions, and is almost wholly influenced by his environment and companions. Hence, if left to himself he readily learns all of the bad habits of men without acquiring their more difficult virtues. His vision and hearing are often defective. In school he is dull; his attention is feeble; he becomes very easily fatigued, and, when pressed beyond his endurance with any new tasks, becomes excited, confused and completely helpless, showing his state of mind by inability to proceed with his work, staring before him with fixed eyes and flushed cheeks, or else breaking out in anger or giving way to tears. He cannot advance beyond the simplest primary lessons in books, though he may be interested in Nature and in manual training. He is able to talk comparatively well, though defects in articulation are common. His walk and movements in general are fairly

well coördinated and in the better class depart very little from the normal. There is, however, about him a general air of vacuity and listlessness which marks him out immediately from the alert, precise, normal child.

Hardly to be distinguished from the normal child is the high-grade imbecile, and here the classification is especially difficult and can be made only by careful and sometimes prolonged observation, though it is easy to distinguish him from the normal child who makes good progress in school. Between him, however, and the dull or backward school child there are, on the surface, no physical differences. It is only the closest investigation of his heredity and life history that certain ancestral neurotic tendencies and accumulations of little departures from the normal are discovered, and that will finally decide the case. It is especially to this class of high-grade imbeciles, and to some extent middle-grade imbeciles, that the *idiots savants* belong. These aments often show the most remarkable talent in one particular direction or another. This, very frequently, takes the form of some manual dexterity like drawing, wood carving, or carpenter work. Sometimes music claims their genius and they accomplish wonders in a short time. Mathematics also attract some, and the "lightning calculator" of public exhibitions frequently belongs to this class. It is on account of such facts that oftentimes the family give an account of a precocious babyhood, or of bright things said and done, of wonderful memories for dates, numbers, and isolated facts, coupled with a complete inability for systematic recollection or assimilation of ideas gathered from books. Unless such high-grade imbeciles are carefully trained in habits of labor and placed in an environment where they will not come into competition with normal

High-
Grade
Imbecile

men, they are likely to lose one job after another and finally to drift into the vagabond or ne'er-do-well class.

After this long digression we return again to our boy under examination. At this stage we must pause and ask if he fits the picture of any mental class described in the preceding paragraphs. Are his physical peculiarities of the kind therein described as belonging to imbeciles, idio-imbeciles, or idiots? Are these idiosyncrasies confirmed by his personal or family history? If they are, a strong case is made out for permanent mental retardation or mental deficiency. If doubt still exists, the next step in the procedure, or the mental examination proper, must decide it. The method of administering these tests will be described in the next chapter.

VII.

THE METHOD OF CLASSIFYING CLINIC CASES

(Concluded)

THE last chapter carried the examination through the physical tests and observations and up to the mental tests proper. When the physical examination is completed several results may have emerged. First, no physical defect may have been found, or, at least, no more than would be expected in any normal child. Thereupon two possible conclusions are open to the clinician: the child may be normal mentally and the cause of his backwardness or moral deviation be due to environment or pedagogical circumstances; or, he may be mentally deficient with no physical stigmata. The mental tests still to be given must determine which he is.

Secondly, a number of removable physical defects may have been discovered, any or all of them of such nature that their presence would fully account for the mental or moral deviation observed. In such a case the final judgment must be held in reserve and the child must be sent to various medical and surgical clinics for relief and restoration to physical health, and possibly even then some special pedagogical training and observation must be added before the final conclusion as to his mentality can be reached.

Thirdly, a number of congenital physical defects indicating retarded or abnormal development and known by experience to be always associated with permanent mental retardation may exhibit themselves, and to these indications certain items of personal and family history may

add their testimony. Here, as in the first supposition, the mental tests must be again appealed to for final confirmation.

The Whole Examination is to Determine Intelligence.—Though we have spoken of the mental test as succeeding the physical, it must be remembered that the whole examination is in a sense mental; that all the previous inquiries and explorations into the family history, into the pedagogical career and the anatomy and physiology of the child have been made with a psychological motive and end in view, namely,—a decision as to the transiency or permanency of the underlying causes of backwardness or moral transgressions. Dulness or amentia? Mischief or moral imbecility?—these questions must be constantly in the mind of the operator from the first moment his eyes rest upon the child presented for classification to the last test he can bring to bear upon the case. In instances of marked deficiency, he will have decided before the unfortunate defective has taken three steps within the door, by the first keen and searching glance at the evident stigmata; in other cases of borderland mentality or of moral delinquency he will be sifting and weighing evidence against evidence through many months of supervised training.

Mental Tests and Their Dangers.—The mental tests are so numerous and of so great a variety that the reader is referred for a full account of them to Whipple's Manual of Physical and Mental Tests. Many of these, however, are not practical for application to the clinic work. This is a fault with many systems.

This much, at any rate, is clear: The clinician cannot ordinarily make use of an elaborate and intricate test. He has not the time to make experiments, nor is the clinic the place for experimentation. Whatever tests he uses

must be simple, comparatively few in number and capable of being applied quickly. Probably, too, no tests will ever be developed which will give trustworthy results when operated by inexperienced hands and minds. Dr. Charles S. Myers, of Cambridge University, places himself upon record in no uncertain terms in the *British Medical Journal* as wholly opposed to hasty standardizing of mental tests and the ill-considered popularizing of their use. He says in part:

"I want to protest as strongly as I can against the notion that any useful purpose can be served, so far as psychology is concerned, by collecting masses of psychological data with the help of an army of untrained observers. But I will leave these difficulties on one side and pass on to the other purposes of this wholesale application of 'mental tests.' This neglect to analyze and to take heed of what is actually being measured is specially prone to occur in the use of mental tests. In other sciences there is little or no real difficulty in observing what we are measuring, if only the experimenter take reasonable care. But in psychology we can only ascertain what we are testing by recourse to introspection on the part of the subject. To neglect introspection in psychological experiments is usually to court certain disaster. If we are in total ignorance of what has been going on in the mind of the subject during the experiment, it is rarely possible to argue from the objective data—from the measurements which it yields. For example, we may be trying to determine whether any correlation exists between sensory discrimination and general intelligence. A positive result may be simply due to the fact that the very nature of the test has compelled the subject to use his intelligence while carrying out sensory discriminations. We may be correlating mental ability with mental fatigue, and neglect the

fact that sometimes we may not be measuring fatigue at all; that in some subjects the task becomes automatic, in others tedious, or that boredom may be in others overcome by motives of duty or ambition. We may be testing the visual acuity of two persons and obtain a different result from each, despite the fact that really they have the same visual acuity. The result may be due to the fact that the one subject strains every effort to interpret what he but dimly sees, while the other only reads what he believes he can clearly see. Thus again we merely obtain a blurred or erroneous result from the blind applications of statistical methods to measurements which are really meaningless owing to our failure to analyze the conditions determining the character we are measuring.

"For these reasons I urge extreme caution, at least for the present, in standardizing 'mental tests' and in popularizing their use. In some forms, no doubt, tests can be usefully applied *en masse*—for example, with the object of determining the standard of intellect which a boy of given age should attain in order to class him as suitable or unsuitable to be taught in an 'ordinary' or a 'special' school. But such tests are 'tests of production,' not 'mental tests.' They determine how much an individual can work, how much he knows—not how he works, how he knows. A man's productivity, of course, is what we want to ascertain in everyday life. We do not care how a man comes to use or to acquire his powers; we are content with a mere dynamometric or other record of his prowess. From this aspect mass experiments must have some value. But this aspect can not properly be called the psychological aspect." ¹

¹ Charles S. Myers, The Pitfalls of "Mental Tests." *British Medical Journal*, January 28, 1911.

To these words of a physician must be added the cautions of Binet, the elaborator of the well-known scale for measuring intelligence. "It is not," he says,² "in spite of appearances, an automatic method, comparable to a scale which, when one stands up on it, throws out a ticket on which one's weight is printed. It is not a mechanical method, and we predict to the busy physician who wishes to apply it in hospitals that he will meet with disappointments. The results of our examinations are of no value if they are separated from all commentary; an interpretation is necessary. The idea that a method of examination can be made precise enough to be trusted to everyone must be abandoned; all scientific procedure is but an instrument which requires the direction of an intelligent hand."

Two Kinds of Tests in General.—As intimated in Dr. Myers' strictures, there are two chief classes of mental tests in existence designed for two different purposes. One kind, called by him "tests of production," determines how much an individual knows, and therefore his fitness for receiving certain kinds of pedagogical instructions. Such tests likewise ascertain his place in everyday life as far as that is determined by his mental attainments. In other words, to the clinician such tests give precise information concerning the degree of pedagogical retardation in any backward child.

It must be remembered that this information is not final in itself, but valuable only as indicating that the child who falls behind his fellows while working under the same conditions as they, must have within him-

² Quoted in *The Binet-Simon Scale and the Psychologist*, by Clara Harrison Town. *The Psychological Clinic*, vol. v, No. 8, Jan. 15, 1912, pp. 239, 240.

self some cause, either physical or mental, for his retardation.

On the other hand, some tests are designed for other ends. They enable the examiner to analyze consciousness or to locate the cause of mental retardation—after such a condition is discovered—in some mental process or group of processes. They reveal how the mind of the subject works or how he learns, or why he does not learn. For clinic purposes each test has its use and its place.

The Pedagogical Tests.—Among the first kind of tests we have found by actual practice in the Psychological Clinic that a pedagogical test based upon the regular public school examination questions holds a place of undoubted value. The original questions, a modification and condensation of which we give below, were taken from the Philadelphia public schools, and apply, therefore, to this locality, though they contain, no doubt, material similar to that used in other schools. One of their claims to consideration rests upon their availability and their practicality. They are found in every school and need but slight simplification and condensation to make them suitable for clinical use.

Before applying them, however, their purpose must be rigidly defined. If they are forced beyond their legitimate sphere, they may work harm; but if their full significance is not understood they will not yield as much information nor play as important a rôle in diagnosis as they justly deserve.

They serve, in the first place, unless the question has already been decided by the oral examination, to measure pedagogical standing. Hence, as we have said, Their Place they determine whether the child is advanced or retarded mentally, and they do this with all requisite

accuracy according to the school standard. In this respect alone their use in a psychological clinic is fully justified, for it is surprising how difficult (or sometimes impossible) it is by questioning to determine in what grade any particular child belongs. Parents confess a surprising degree of ignorance on the subject and the children frequently do not possess sufficient mentality to give more than vague and unintelligible answers. To have at hand a ready method of deciding such an important question both for classification purposes and for future training puts the clinician upon a firm footing.

But beyond the measurement of general retardation these tests determine intellectual attainments already acquired by the child. Hence they give some indirect estimate of his mental capacity. They do not measure single mental processes, it is true, but that is no detriment at this stage of the mental examination, which is concerned with the general mental status of the child. In coming to a conclusion on this point, the final test of his mental ability is his general reaction toward any group of stimuli. How well he accomplishes his assigned tasks, or plays his games, or is able to acquire the ordinary rudiments of an education under the same conditions that obtain with normal children,—how much he produces, as suggested above,—are of far more importance for predicting his mental ability to hold his own in society than many a fine-drawn technical test worked out in a laboratory.

Reading as a Mental Test.—Reading is a good example of such a general test. To a trained observer the very way the child picks up a book and holds it is highly significant. He may immediately exhibit many signs of muscular cöordination. The utterance of the first words tells much more in the same direction. He may

mumble, stammer, mutter, stutter, hesitate, or else he may proceed articulately, fluently, distinctly with the proper intonations and emphases. The finer muscular coördinations necessary for clear pronunciation are exceedingly delicate registers of that "tone" so strikingly characteristic of the normal child in contrast with that flabbiness belonging to every muscular and mental effort of the subnormal. The sensory faculties as well as the motor are being tested at the same moment. The child hardly needs to read a line, or even a word, in order to furnish the attentive observer with some data as to his visual acuity. This appears from the position of his book, the position of his head, the squint of his eyes, the wrinkles on his forehead, the way he follows words, lines or letters. The distance of his book from his face may reveal myopia or hypermetropia; the wrinkles tell of eye-strain, headaches and the traditional "bilious attacks"; the tilt of the head may be an attempt to eliminate or suppress the image of one eye. Not long ago, at the clinic, almost total blindness in one eye of a backward boy, undergoing a long treatment for defective audition, was discovered by the simple process of closing the eyes alternately while he was reading from an ordinary school-book.

When the command is given for the child under observation to read and while the reading is going forward much can be learned of his general disposition and attitude toward his tasks. He may act immediately, willingly, smilingly, briskly; or he may hang back, scowl, move slowly with reluctance, awkwardness and ungraciousness in every movement. He may meet new words by an attempt to pronounce them, or spell them, or may come to a dead halt and wait inertly until they are pronounced for him. He may take no interest in the story, tire quickly

and let his attention wander; or he may gain interest with every line, become absorbed and show evident pleasure in the task. While none of these indications are final for determining his mental status nor even decisive for judging his attitude toward the larger tasks of life, they are still weighty factors in deciding on both of these points, and their weight will depend to a large extent upon the acuteness of the observer and his experience in summing up these ordinary expressions of character.

The contribution made to the observer's knowledge of the mental acquisitions of the child is of course the primary object of the exercise. It reveals at once whether the child can read or not; that is, whether at least he can pronounce printed words or not. How well he can do this is shown by manner of reading,—whether he proceeds slowly, hesitatingly, monotonously without inflection, emphasis, cadence or expression, or easily, fluently, and intelligently. A few judicious questions at the end will reveal something of his ability to recall the words, to remember what he has read in general terms or in his own words and to understand the nature of what he has read, which in itself will give some hints as to his powers of imagination and his general information as well as his ability to gather information from symbols. Thus by having him read a few paragraphs much evidence can be collected upon a child's muscular co-ordination, his general attitude and disposition, his intellectual attainments and his mental capacities. His intellectual powers, his emotions and his will are all involved in the simple task. Sensation, perception, imagination, memory and reason, in varying degrees, are investigated and each one furnishes its quota of information. In all of these respects

Recalling
What is
Read

what he does not know or is not able to do is as important as what he does know or do.

Arithmetic as a Test.—In a like manner we might go through each one of the pedagogical tasks of the test and indicate how rich and varied is the information to be gathered through their correct use. Much must be left for the clinician to elaborate for himself. Arithmetic, of course, enlarges the observer's information upon the reasoning powers of the child and settles the question of ability to grasp abstract numerical relations. With some the passage from the concrete to the abstract is impossible and marks a permanent defect. If the problems are spoken, care must be taken to note the child's auditory acuity; if they are written, his reading ability is again taken into account.

Oral Dictation as a Test.—In oral dictation, in which he writes down sentences read for him, the pupil's auditory acuity for daily sounds, his auditory memory, his skill in writing demanding some of the most complex coördinations, and his ability to express knowledge by means of symbols all come out. Spelling, or writing single dictated words tries his memory again from a new angle in its simple physiological aspect. Throughout his powers of attention—the *sine qua non* of all learning—have been tested in their various forms and phases.

The Educability of the Child.—Finally, the pedagogical examination furnishes testimony upon one question of supreme importance in the classification, viz., the educability of the child. The question is not only primary in diagnosis, but of vital import for all future training. If by the pedagogical examination the child in question shows that he has been able to acquire even the rudiments of reading, writing and arithmetic by the prevailing

methods of the ordinary school-room, it proves that he possesses ability to learn out of books. He is able to absorb symbolic knowledge. His education need not be confined to the physiological method or to motor expressions alone. He not only receives sensory impressions but translates them into meaning for his life and well-being. He apperceives in a sense and by methods which lift him at once into a comparatively high mental position and promises hope for the future. His learning may be comparatively small in amount and his progress may be greatly retarded, but the examiner familiar with the situation sees there the germ of potentialities yet undeveloped and is able to predict with some accuracy to what extent these powers may be developed by more intense methods of individual instruction than those possible in the school-room. Probably then it is not too much to say that by the observation of the way in which a child reacts to the pedagogical tests, taken in conjunction with all the preceding information gained from the oral and physical examinations, the trained examiner who is familiar with these tests will be able to gauge the general intellectual capacity of a pupil with sufficient exactness to assign him to the class of curable or incurable mental deviates to which he belongs and to the sub-class of aments if he is found to be of that company. To substantiate his classification, it must be remembered, he still has other tests, both pedagogical and of different kinds yet to be described.

The pedagogical tests in use at the Psychological Clinic at the University of Pennsylvania are given below. As already stated, they were secured from the public schools and were modified to suit the conditions in hand. Four grades of reading, writing, arithmetic, dictation, and spelling are given. The normal child should secure at

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least 75 per cent. in each branch of study in the grade corresponding to his age, assuming that he began school at six years and was promoted each year.

SECOND GRADE

READING. (8 years old.)

Directions.—Give a maximum of 40 credits for reading the words correctly, including articulation and pronunciation, and 60 credits for expression and natural rendering of the thought. The child's knowledge of the meaning may be ascertained by conversation, or by judicious questioning.

MY DOG SPOT.

1. My dog Spot knows a great deal. I think he knows almost as much as I do. He knows more than I do about some things.

When we are away off in the woods, and I cannot find the way home, I follow Spot. I say to him, "Go home, Spot!" He looks at me, and then off he goes. He always goes straight home.

2. I think he knows some things I say to him. When I say, "Sit up, Spot!" he sits up as straight as a man, and holds out one paw as if to shake hands. When I say, "Roll over!" down he goes and rolls over and over. If I tell him to lie dead, he will shut his eyes and lie still, and not open his eyes even if I pull him by the tail.

SECOND GRADE

SPELLING AND DICTATION. (8 years old.)

Directions.—Exercise No. 1. 100 credits. Deduct 5 for every error. Dictate a sentence at a time. A long sentence may be given in two parts. Avoid repetition. The exercise is to be written but once.

Exercise No. 2. 100 credits. 10 for each word. If the meaning is not clear, a word may be repeated in a sentence.

Exercise No. 1.

William Brown has a pet monkey. He is a very funny little fellow. He likes to do what he sees people do. He soon learned to eat with a spoon and a fork. He drinks from a cup.

Exercise No. 2.

butter	basket
apples	father
coffee	draw
fruit	cunning
pencil	snow

SECOND GRADE

ARITHMETIC. (8 years old.)

Exercises for Rapid Work: 100 credits. 10 credits each.

Directions.—1. When a child counts on his fingers give no credit for the result.

2. The child should not be allowed to use written work in any form as an aid in making the calculations. No alterations or corrections are to be permitted.

3. The questions in 1 to 10 are intended for rapid work. Results not given promptly are of no value.

1. Write in figures 689.
2. Write in Roman numerals 11.
3. 19 plus 7 equals?
4. 7 times 9 equals?
5. 48 divided by 8 equals?
6. How many days in 9 weeks?
7. $\frac{1}{2}$ of 36 equals?
8. 3 dozen pencils are how many?
9. What is the cost of 8 oranges at 4 cents a piece?
10. Place the hour hand on the clock face between 3 and 4 and the minute hand at 6. Require the child to tell the time.

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Written Work: 100 units; 20 units each.

Directions.—1. Place problem 4 on the paper in the form in which it is stated on this paper; do not subdivide the credits.

2. In problems 5, 6, and 7, give no credit if the principle is not correct; give half the credits if the principle is correct and the work incorrect.

3. Place each example on paper and read it to the child. After allowing a reasonable time to perform the problem, erase it before proceeding to the next.

1. Subtract 235 from 763.

2. 978 divided by 6 equals?

3. John bought a cap for 48 cents, a penknife for 25 cents and a ruler for 5 cents. How much did he pay for all?

4. A storekeeper sells pineapples at 6 cents each. How much will he get for 14 pineapples?

5. A storekeeper sells his small flags at 5 cents a piece. How many can you buy for 65 cents?

THIRD GRADE

READING. (9 years old.)

Directions.—Give a maximum of 40 credits for reading the words correctly, including articulation and pronunciation, and 60 credits for expression and natural rendering of the thought. The child's knowledge of the meaning may be ascertained by conversation or by judicious questioning.

HOW TWO BOYS GOT SCARED.

We waded up the brook until we got into the woods. It was very lonely. All at once we heard a terrible splashing. "What is that?" said Jimmy.

"I guess it's our bear," said I. "Now you look him firmly in the eye, and he will slink away."

"Don't you think it would be better to climb a tree?" said Jimmy in a shaky voice.

The splashing came nearer and nearer. "Perhaps you can run away if he stops to eat me," said Jimmy. Then I felt bold as a lion. "He shan't eat you, Jim; I will hit him with my fist."

"Bow-wow-wow!" said a voice that we knew well. Then our old dog Carlo came dashing through the bushes. I tell you we were glad to see him.

THIRD GRADE

SPELLING AND DICTATION. (9 years old.)

Directions.—Exercise No. 1. 100 credits. Deduct 5 for every error. Dictate a sentence at a time. A long sentence may be given in two parts. Avoid repetition. The exercise is to be written but once.

Exercise No. 2. 100 credits. 10 for each word. If the meaning is not clear, a word may be repeated in a sentence.

Exercise No. 1.

One morning Mrs. Johnson, a farmer's wife, was preparing to make the butter at the back of the house. The house stood near the edge of the woods. She had just put the cream into the churn and had gone away.

Exercise No. 2.

oranges	people
cabbage	Atlantic Ocean
playthings	weather
breathing	pitcher
wholesome	napkin

THIRD GRADE

ARITHMETIC. (9 years old.)

Exercises for Rapid Work.—100 credits. 10 for each problem.

Directions.—Dictate every question in these exercises. No question or part of a question is to be written.

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The child is not to be allowed to use written work in any form or as an aid in making the calculations. No alterations or corrections are to be permitted.

The questions in 1 to 10 are intended for rapid work. Results not given promptly are of no value.

1. Write in figures 72307.
2. Write in Roman numerals 38.
3. 17 plus 8 plus 10 equals?
4. 9 times 8 minus 20 equals?
5. 99 divided by 11 plus 16 equals?
6. $\frac{2}{3}$ of 27 equals?
7. How many weeks in a year?
8. How many inches in 4 feet and 6 inches?
9. How many pounds in a ton?
10. What part of a dollar is 25 cents?

Written Work:

1. 92041 minus 45629 equals?
2. 53840 divided by 76 equals?
3. Change 760 ounces to pounds and ounces.
4. How much change would you get from a two-dollar bill after buying 3 bushels of potatoes at 55 cents a bushel?
5. A grocer had 54 watermelons. He sold $\frac{1}{4}$ of them. How many had he left?

FOURTH GRADE

READING. (10 years old.)

Directions.—Give a maximum of 40 credits for reading the words correctly, including articulation and pronunciation, and 60 credits for expression and natural rendering of the thought. The child's knowledge of the meaning may be ascertained by conversation or by judicious questioning.

JOHN LARKIN'S LESSON.

1. John Larkin was a little boy who was fond of seeing things grow. He had a pretty little garden, where he

could see the tiny plants come up from the seeds which he had planted.

2. By the side of the garden, with a fence between, was a yard for the hens and chickens. He saw the hens go to their nests and lay their eggs. Each hen laid one egg almost every day; and soon after the egg was laid the hen came off the nest, sometimes quietly, but nearly always cackling.

FOURTH GRADE

SPELLING AND DICTATION. (10 years old.)

Directions.—Exercise No. 1. 100 credits. Deduct 5 for each error. Dictate a sentence at a time. A long sentence may be given in two parts. Avoid repetition. The exercise is to be written but once. Exercise No. 2. 100 credits. 10 for each word. If the meaning is not clear, a word may be repeated in a sentence.

Exercise No. 1.

CLOUDS.

William's mother was talking about the rain. "Is the rain in drops up in the clouds, mother, or is it all in one, like a pond of water?" asked William. His mother replied, "It is in drops so very small that we may call them rain dust or water dust."

Exercise No. 2.

tangle	custard
vinegar	funeral
tomatoes	Delaware River
alligator	bicycle
continue	oyster

FOURTH GRADE

ARITHMETIC. (10 years old.)

Directions.—100 credits. 10 for each problem.

Dictate every question in these exercises. No question or part of question is to be written.

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The child is not to be allowed to use written work in any form as an aid in making calculations. No alterations or corrections are to be permitted.

The child should be required to number the questions as dictated, and to write the final results only, as soon as obtained.

Questions in Nos. 1 to 10 are intended for rapid work. Results not given promptly are of no value.

Exercises for Rapid Work:

1. Write in figures 307649.
2. Write in Roman numerals 175.
3. 27 plus 17 minus 14 equals?
4. 81 divided by 9 plus 17 equals?
5. $\frac{1}{4}$ of 48 plus 24 equals?
6. $\frac{1}{4}$ plus $\frac{1}{3}$ equals?
7. How many cubic inches in a cubic foot?
8. Write 3 prime numbers larger than 7.
9. 2 quarters and 2 dimes are how many cents?
10. How many cubic feet in 2 cubic yards?

Exercises for Written Work:

The following problems may be placed on the paper one at a time.

100 credits. 20 for each problem.

1. If 4 gallons of oil cost 80 cents, what will $\frac{3}{4}$ of a gallon cost?
2. Multiply $4\frac{3}{4}$ by 12.
3. Divide $\frac{2}{3}$ by $\frac{1}{4}$.
4. How many square inches in 4 square yards, 6 square feet and 66 square inches?
5. Make out the following bill and receipt it:—
5 bushels potatoes at 75 cents a bushel.
8 baskets tomatoes at 60 cents a basket.
6 baskets peaches at 85 cents a basket.

FIFTH GRADE

READING. (11 years old.)

Directions.—Give a maximum of 30 credits for reading the words correctly, including articulation and pronunciation, and 70 credits for expression and natural rendering of the thought. The child's knowledge of the meaning may be ascertained by conversation, or by judicious questioning.

THE BRAVE MOTHER.

A little wren made her nest in a tree in my yard. She protected it from the cats by building it far out on a slender branch. She hid it from all prying eyes by placing it on the side nearest the house and farthest from the path.

Searching one day for some blossoms of the honeysuckle that grew against the wall, I discovered the nest. It had three tiny eggs in it. The mother-bird had been sitting on the nest, but she flew away at my approach. Day after day I watched her sitting patiently on that nest. Finally her patience was rewarded, and three little wrens nestled under her wings.

FIFTH GRADE

SPELLING AND DICTATION. (11 years old.)

Directions.—Exercise No. 1. 100 credits. Deduct 5 for each error. Dictate a sentence at a time. A long sentence may be given in two parts. Avoid repetition.

Exercise No. 2. 100 credits. 10 for each word. Dictate each word but once. If the meaning is not clear, a word may be repeated in a sentence.

Exercise No. 1.

JOE'S CONFESSION.

Joe had played a mean trick on old Mr. Jackson. He had thought it was fun, but now he felt unhappy. Joe went to old Mr. Jackson and asked to be forgiven. Do you think that was easy for Joe?

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Exercise No. 2.

excursion	delicious
particular	bribery
salary	bishop
physician	telephone
nourish	question

FIFTH GRADE

ARITHMETIC. (11 years old.)

For Rapid Work:

Directions.—The child should not be allowed to use written work in any form as an aid in making the calculations.

Results not obtained and recorded promptly are of no value.

100 credits. 10 for each problem.

1. Subtract .8 from 2.5. Give answer as decimal.
2. What are the prime factors of 12?
3. $\frac{3}{4}$ minus $\frac{1}{8}$ equals?
4. $\frac{3}{8}$ times $\frac{4}{5}$ equals?
5. How many square feet in $1\frac{1}{2}$ square yards?
6. At \$5 per dozen what will 48 shovels cost?
7. How many hours in $5\frac{1}{2}$ days?
8. Reduce $1\frac{1}{3}$ to sixths.

Written Work: 100 credits 20 for each problem.

The analysis of problem 3 is to be written out in full. Give no credit if the principle is not correct.

In problems 4 and 5 give no credits if the principle is not correct. Give half the credits if the principle is correct and the work is incorrect.

1 If $\frac{3}{4}$ of a bushel of barley costs 45 cents, what will $6\frac{1}{2}$ bushels cost?

2. Multiply the sum of $2\frac{1}{3}$, $5\frac{1}{4}$ and $7\frac{1}{2}$ by 12.

3. A lady bought 5 yards of cloth at \$1.25 per yard, $8\frac{1}{2}$ doz. buttons at 72 cts. per doz. and 4 collars at \$1.12 $\frac{1}{2}$ each. She paid cash. Make out a bill and receipt it.

4. At \$1.50 per square rod, what will 2 acres of land cost? Reduce 20526 feet to higher denominations.

5. A coal dealer sold 3 carloads of coal weighing 36.625, 28.25 and 42.87 tons at \$6.40 per ton. What was the total amount of the sale?

Non-Pedagogical Tests.—Manifestly, pedagogical tests are suited only to those children who have attended school for some period of time. For those who are too young, or for those who because of any reason whatever have been unable to attend school, a system of tests has also been formulated. These, like the pedagogical tests, are general, in that each of them involves a great many mental processes, and also, in that they measure the general attitude of the child toward a task. They are not pedagogical in the sense that they have been taken from the regular scholastic tests of the school-room, though some of them for children above the school age involve certain acquirements usually obtained in the school-room, like reading, writing and arithmetic. From the name of their originator these are called the Binet tests, which are being so widely applied both to the problems of retardation in the school-room and to the problem of examining mentally defective children in the various institutions. For the latter purpose, though the tests were originally formulated for the children in the French school, several modifications have been made to fit American conditions.

The Binet Scale.—It is neither our task nor our province to enter upon an extended criticism of the Binet-Simon scale. One or two cautions, however, appear necessary in this place. They concern both the method of applying the scale and the results to be obtained by its use.

Concerning the former, Binet, himself not only gave

some general advice applying to all tests but added specific injunctions concerning the use of his own scale. "The results of our examinations," he is reported as saying,³ "are of no value if they are separated from all commentary; an interpretation is necessary. . . . The microscope and the graphic method are admirable methods of precision, but what intelligence, circumspection, erudition, and art are essential to the practice of these methods! Imagine the value of observations made with the microscope by an ignoramus scarcely better than an imbecile. We have seen examples which caused us to shudder." Others have added similar words of caution like the following:

"In conclusion, I would urge that these Binet tests must be used with judgment and trained intelligence, or they will certainly bring themselves or their authors into undeserved disrepute. Such a syllabus as is here presented by no means prepares mothers and teachers to make any valid test either of their children or of the scale. A child will often be shown to have the knowledge needed in a test which is not of knowledge merely, but of the ability to use knowledge in meeting a situation created by the standardized conditions of the test. Results can be considered valid only when the tests are made by an experienced psychologist who has familiarized himself with Binet's directions, or by other competent persons who apply the tests under the directions and supervision of such a psychologist."⁴

The Purpose of the Binet Tests.—The purpose to be accomplished by the Binet tests must be clearly de-

³ *The Psychological Clinic*, vol. v, No. 8, Jan. 15, 1912. The Binet-Simon Scale and the Psychologist, Clara H. Town, pp. 239, 240.

⁴ E. B. Huey, *The Binet Scale for Measuring Intelligence and Retardation*, *Jour. of Educational Psychology*, vol. i, No. 8, Oct., 1910.

finéd by the examiner. It certainly does not seem too much to say that incurable mental retardation of certain degrees cannot be distinguished from curable mental retardation by the Binet tests alone. They may test the degree of mental retardation of a child with great ease and with as much exactness as do the pedagogical tests. But the degree of retardation, except in unusual cases, like that of Kaspar Hauser, for example, does not determine mental deficiency in our sense of the term. Two boys, each eleven years of age, could conceivably measure up to only seven years by the Binet tests. Each would be three years retarded. Yet one might be mentally defective and the other only retarded. The first might have been developed by wise training to his full capacities. The second might be retarded as far as responses to mental tests go, both in his intellectual attainments and in his mental capacities. But if his physical defects—his malnutrition, his poor vision, bad audition, deteriorated dentition, infected tonsils—if these were all remedied, as they might be, there is no reason for assuming that he could not develop to the mental stature of a full-grown man.⁵

⁵ For a fuller study of the Binet tests see articles by Binet and Simon, *Les Enfants Anormaux*, 1905 and 1907; *L'Année Psychologique*, 1908 and 1911; *La Mesure du Développement de l'intelligence chez les jeunes enfants*, *Bulletin de la société libre pour l'étude psychologique de l'enfant*, April, 1911, pp. 187-284.

For translations and criticisms of the scale, see articles by Henry Goddard, *Two Thousand Normal Children, Measured by the Binet Measuring Scale of Intelligence*, *Pedagogical Seminary*, June, 1911, vol. xxviii, No. 2, pages 232-256; Binet's Measuring Scale of Intelligence, *The Training School*, vol. vi, No. 2; A Revision of the Binet Scale, *The Training School*, vol. viii, No. 4, pages 56-62; Leonard P. Ayres, *The Binet-Simon Scale for Measuring Intelligence: Some Criticisms and Suggestions*, *The Psychological Clinic*, vol. v, No. 6, pages 187-196, incl. O. Deroely and Mlle. J. Degrand, *La Mesure de l'intelligence Chez des Enfants Normaux e'Après les*

This restriction does not at all require the elimination of the Binet tests from mental examinations. It merely points out what Binet himself said, namely, that the scale is not an automatic, registering machine which announces a decision regarding a child's mental status with mechanical certainty. That decision must be reserved for the operator, and, in making it, he must take into consideration many other of the subject's reactions besides those appearing in his oral or written answers and in his prescribed acts. When this is done by a skilled operator the tests become immediately valuable. They are simple, easy to apply, few in number, require little apparatus, and, best of all, give their results in terms of normal age easily understood by all concerned. They can be looked upon as so many partial but fairly accurate descriptions of normal children of different ages. With these cautions and commendations we are ready to consider the tests themselves. They are here arranged, as we use them in the clinic, in convenient parallel columns giving first the test and the method of fulfilling it immediately opposite. A report blank is also attached for announcing the results.

Directions for Giving Binet Tests.—The following directions for administering the tests were formulated by Binet himself and should receive the most careful perusal by anyone who expects to obtain valid results by their

Tests de MM. Binet et Simon, Nouvelle, Contribution Critique, *Archives de Psychologie*, vol. ix, Jan., 1910, pages 81-108. Miss Katharine L. Johnston, M. Binet's Method for the Measurement of Intelligence:—Some Results, *Journal of Experimental Pedagogy and Training School Record*, vol. i, No. 1, pp. 24-31. Otto Bobertag, Ueber Intelligenz Prüfung (nach der Methods von Binet und Simon), *Zeitschrift für angewandte Psychologie*, vol. v, No. 2, 1911, pp. 105-203; The Binet Scale and the Psychologist, Clara H. Town, *The Psychological Clinic*, vol. v, No. 8, pp. 239-245.

use. So much confusion and so much discussion has arisen in America concerning the meaning and the use of the measuring scale and what it will and will not do, that it was thought best to give these directions just as their author himself states them, omitting only some unimportant details.

"Commence with each subject by using the tests designed for his age. If too difficult tests are tried at first he is discouraged. If, on the contrary, they are too easy, he grows disdainful, wonders whether he is being made fun of and makes no effort.

"In reference to the experimenter himself, some conditions are necessary. He must not allow himself to be prejudiced by information obtained from other sources. He should banish from his mind all that he has been told concerning the child and consider him as an x , which he must solve with the means in his power. He should be firmly convinced that in using the method one must necessarily gain a profound knowledge of the child, and so entirely ignore all other information. . . .

"This initial period lasts for at least five or six seances of two hours each, and represents examinations of twenty children. All experimenters intending to use the method should submit to such a preparation.

"The tests should be prepared in advance; the little material required should be close at hand; all the required coins should be kept in a special purse. Two records should be kept: the first recording the numerical results of the tests, and the second, a note-book, recording the responses in detail. . . .

"Opposite the test names the results are expressed by the following symbols: the $+$ sign indicates that the test is passed; the sign $-$ indicates failure; the sign 0 indicates

a silence; the sign ? indicates that the result is doubtful; if a doubtful result is nearer failure than success the signs — ? are used; if it is nearer success the signs + ?. When the result is excellent we use a cross (+ !) and !, and when it is altogether bad — !.

“We advise that the sign be recorded immediately the test is completed, not after the examination upon the reading of the notes. One can understand why we so advise. In recording a symbol we do not register automatically what takes place, but we record a judgment, and this is more recent. No matter how detailed the notes, they reproduce but very incompletely the actual experience. An enormous amount of detail is omitted, as a matter of course, to be supplied by the memory of the experimenter, and it would be wrong to trust entirely to the notes.

“Having marked the results of the tests by signs, more extended notes are recorded in the note-book. This should contain the full name of the child, his age, date of birth, the date and place of examination, the quality of the assistants and any exceptional circumstance influencing the examination. . . .

“The notes relative to each test which should be recorded in this book.—Experience is the best teacher of what is useful to preserve. It is necessary to bear in mind that the symbol alone is altogether insufficient, and that we should have sufficient data to enable another experimenter to judge of them on his own account. Thus, in the responses to the question involving the reason powers, the manner in which the child explains or criticises the absurdities of certain phrases must be given at length. In using the test requiring the repetition of figures it is well to have model series and not

Marks

Notes

to vary them. Then what the child gives may be recorded. This precaution will guard against the possible loss of interesting facts. For example, the experimenter recites: 1-3-9-2-7. The child, believing himself repeating, says: 1-3-4-5-6. The error is very grave, graver than had he said 1-3-8-5-0. For in the first repetition he has followed the natural order of numbers, and by so doing has implicitly admitted the absurdities that he has been asked to repeat numbers in their natural order. A little commentary helps to fix results in memory. The definitions of words and objects and the résumé of the thought should be written in detail. In the test calling for 60 words it is sometimes difficult to write all the words given by the child. Interesting indications can, however, always be secured. For example, each word may be represented by a vertical line, and a new group be started every half minute (the total test lasts three minutes). Thus a record is secured of the number of words written in the first half minute, the number in the second, the number in the third, etc. This shows whether the subject has increased or decreased in speed as the experiment progressed, and this in turn gives some indication of his ability to work. I am also in the habit of dotting the lines which correspond to the names of objects mentioned and of underlining those which stand for an unusual word, one not in common use. We advise that the rhymes be recorded and also the sentence containing the three given words. By exacting all these notes from collaborators it is possible to judge with what care the experiments have been made. A record of the intelligence of a child, presented without other data than some symbols, certainly seems subject to doubt. It cannot be tolerated; it would encourage negligence and even fraud.

“Utilization of notes.—We have recorded a series of signs in vertical columns; these signs succeed each other irregularly. Here there is a —, there +. How shall we interpret them? It is at once evident that no matter how the tests are arranged it is impossible to find an order in which one test will mark the limit of achievement, all tests preceding it being passed successfully and all those following being too difficult. Such an order can easily be arranged for one individual, but it would not prove satisfactory for a second and a third.

“Let us examine the effect of the order which we have adopted, as shown in an examination of 10 children, nine years of age. In the tests for the ninth year which amount to 50 (as there are 5 tests and 10 pupils) these ten children failed in 6 and succeeded in 44. In the tests for the tenth year, they failed in 14 and succeeded in 36. We do not find a limiting test which fails all and which only fails children of this age or younger. That would be a useful

Method of
Counting
Results criterion, but we have not discovered it and do not believe that it exists. The actual result is less simple. The experiment shows us the following

facts. The nine-year-old children succeeded in all the very simple tests and they succeeded in none of the very difficult ones. In the tests of moderate difficulty some children succeeded with certain tests and some children with others. This varied with each child. This is the fact which we are obliged to consider. Each child has its own individuality; one succeeds well with test A and fails with test B; another of the same age fails the test A and succeeds test B. How shall we deal with these individual differences in our experimental results? We have no exact knowledge concerning the cause. It is probable that the mental faculties stimulated by the tests differ and are of an unequal

development in different children. If a child has a better memory than his companions, it is natural for him to be more successful in a test of simple repetition. Another who has already a capable hand will arrange the weights more successfully. Another reason is that all of our tests presuppose an effort of attention and the attention varies during our tests. We also presuppose an effort during a period of concentration, especially with young people: now it is intense; a minute later it is relaxed. Suppose that the subject has a moment of distraction, of embarrassment, of ennui during a test. Complete failure may result. One cannot doubt the justice of this last reason. We are so convinced on this point that we think it chimerical and absurd to judge the intelligence of a child by one test alone.

“The preceding considerations lead us to the conclusion that the intellectual level of a child can be judged only by a group of tests. It is success in several distinct tests which alone is characteristic. Intelligence cannot be estimated as can the height. . . .

“It is altogether otherwise when we estimate the intelligence. If one wishes to apply the same system of comparison between the intelligence of one child and the mean intelligence of children of different ages one is hindered by the difficulty which we have mentioned above. A child is retarded for certain tests of his own age and advanced for others. We think, however, that this difficulty can be overcome; but it is on condition that we adopt some convention; and the said convention, be it the best possible, will always give to the proceeding an artificial character. If by chance another convention has been adopted sensibly different results would have been reached.

We feel it necessary to insist on this fact, because later, for the sake of simplicity of statement, we will speak of a child of eight years having the intelligence of a child of seven or of nine years.

"These expressions if accepted arbitrarily may cause errors. If accepted, it is necessary to remember that the estimate of the amount of retardation or precocity of intelligence depends partially upon the conventional proceeding which we have adopted.

"The rules which we apply are two. The first we have adopted is as follows: A child has the intelligence of that age all the tests for which he succeeds in passing.

Here is a child nine years of age who passes all the tests for the seventh year. He has then at least the intelligence of a child of seven.

Rules for
Counting
Results

The second rule is as follows: After determining the age for which a child has passed all the tests, a year is added to the intelligence age, if he has succeeded in passing five additional tests belonging to superior age groups; two years are added if he has passed ten such tests, three years if he has passed fifteen, and so on.

"Thus a child has passed the five tests for the eighth year; he has the intelligence of eight years. In addition he has passed three tests for nine years and two tests for ten years. We add one year for the five tests, the record stands 8 and 1 make 9, and the child has an intelligence of nine years. Another example: A child has passed the 5 tests for 6 years; he has the intelligence of 6 years. He also passed 3 tests for 7 years, 3 for 8 years, 2 for 9 years, 2 for 10 years, and 1 for 11 years. This gives him 11 extra tests, and adds 2 years to his intelligence age, making it 8 years. A last example: A child passed

all the tests for 4 years, he passed in addition 1 test for 5 years, 3 for 6 years, 2 for 7 years, 4 for 8 years, 3 for 9 years, 2 for 10 years; he has then 15 additional tests, which is equivalent to 3 years, and he is accorded the mental age of 7.

"The result of this notation is that it qualifies a child as *regular* in intelligence if it has an intelligence age equal to its age; as *advanced* in intelligence if it has an intelligence 1 or 2 years greater than its age, and as *retarded* in intelligence if it has an intelligence 1 or 2 years inferior to its age. The symbols used to express the results are: =, or + 1, + 2, + 3, etc.; or, - 1, - 2, - 3, etc.

"We would add that a child should not be considered defective in intelligence, no matter how little he knows, unless his retardation of intelligence amounts to more than two years.

"If a child is to be examined a second time it is best, in order to guard against the coaching of the child by his companions, to allow a period of at least 6 months to intervene between the examinations.

"A last word for those persons who desire to employ the method. Any one can use it for his own personal satisfaction or to obtain an approximate evaluation of a child's intelligence, but for the results of this method to have a scientific value it is absolutely necessary that the individual who uses it should have served an apprenticeship in a laboratory of pedagogy or possess a thorough practical knowledge of psychological experimentation." ⁶

⁶ For this translation I am indebted to Dr. Clara H. Town, Psychologist at the State School for Feeble-minded, Lincoln, Ill.

210 THE CONSERVATION OF THE CHILD

REPORT BLANK FOR THE BINET TEST.

Name..... Made by.....

Born..... Date.....

Test Age.....

Remarks:	Six Years:	Ten Years:
	1.	1.
	2.	2.
	3.	3.
	4.	
	5.	4. 1st series a

b

c

Remarks:	2nd series a
----------	--------------

b

c

d

e

Three Years:	Seven Years:
--------------	--------------

1.

1.

5.

2.

2.

3.

3.

Remarks:

4.

4.

5.

5.

Eleven Years:

Remarks:

Remarks:

1. a

b

c

d

e

Four Years:

Eight Years:

1.

1.

2.

2.

2.

3.

3.

3.

4.

4.

4.

5. a

5.

5.

b

c

Remarks:

Remarks:

Remarks:

Five Years:

Nine Years:

Twelve Years:

1.

1.

1.

2.

2.

2.

3.

3.

3.

4.

4.

4.

5.

5.

5.

Remarks:

Remarks:

Remarks:

BINET TESTS

CHILDREN OF THREE YEARS.

1. Where is your nose? Your eyes? Your mouth?

One of the best signs of awakening intelligence in young children is the comprehension of spoken words. We test by asking these questions which can be answered by a gesture.

2. Repetition of sentences of six syllables.

It rains. I am hungry. (6 syllables.) Experiment proves that it is easier for a child to repeat words than to speak a word of his own. If a child does not respond one may try him with two syllables ("*mama*"), then four, etc. A child of three repeats six syllables but not ten. There must not be a single error.

3. Repetition of figures. "6-4."

A child of three can repeat two figures. Figures require closer attention than words because they mean nothing to him. Pronounce the figures distinctly, one-half second apart, and without emphasis on any one figure.

4. Describing pictures.

A picture is shown to the child with the question, "*What do you see?*" The pictures must be chosen with some care. Each one must represent some *people* and a *situation*. Binet uses three pictures. The first is a man and a boy drawing a cart loaded with furniture. The second, a woman and a man sitting on a bench in a park in winter. The third, a man in prison looking out of the window; a couch, chair and tables. A child of three names the things—enumerates. He does not describe any actions in the pictures.

5. Name of the family.

All children of three know their *first* name. They sometimes know the *family name*, but not always.

CHILDREN OF FOUR YEARS.

1. Sex of child.

Are you a little boy or a little girl? If testing a girl, give the question in this form: *Are you a girl or a boy?*

2. Naming familiar objects.

One takes from his pocket a *key*, a *knife*, and a *penny*.

The answers should indicate that the child knows what each is. This is more difficult use of language than naming the objects in the picture, because there the child chose his own object to name; here we say, "*What is this thing?*"

3. Repetition of three figures. "7-2-9."

4. Comparison of two lines. "*Which is the longer line?*"

Draw two parallel lines three centimetres apart, the one five centimetres and the other six. Hesitation is failure.

CHILDREN OF FIVE YEARS.

1. Comparison of two weights. "*Which is the heavier?*"

Use weighted blocks of wood of equal size and appearance.

Compare three grammes with twelve grammes and six grammes with fifteen grammes. Note the curious and interesting errors that are made.

2. Copying a square.

Draw a square of three or four centimetres. Have the child copy it with ink—not pencil. Pen makes it harder. It is satisfactory if one can recognize the square.

3. Repeat sentence of 10 syllables.

Use this: His name is John. He is a very good boy.

4. Counting four pennies.

Place four pennies in a row. Insist that child count them with his finger.

At three years a child does not know how to count four: at four half succeed: at five all succeed.

5. Game of patience with two pieces.

Cut a visiting card diagonally. Place a whole card on the table. Nearer the child place the two pieces with the

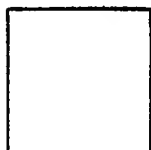
FIG. 1.



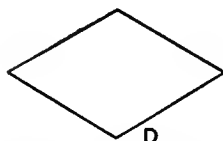
A.



B.



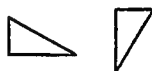
C.



D

See little Paul

F



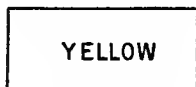
E



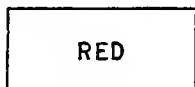
G



H



YELLOW



RED



BLUE



GREEN

I

MATERIALS FOR BINET TESTS.

- A—For 8-year, No. 4
- B—For 4-year, No. 4
- C—For 5-year, No. 2
- D—For 7-year, No. 4

- E { For 15-year, No. 2
- { For 5-year, No. 5
- F—For 8-year, No. 5 (1908 ed.)
- G—H—For 10-year, No. 2
- I—For 7-year, No. 5

two hypothenuses away from each other. Ask the child to make a figure like the uncut card. One child in twelve fails.

Be careful (1) that the child does not fail because he is too indolent to reach out and try: (2) that one of the two pieces does not get turned over—because then it is impossible: (3) that you do not show by a look whether the child is right or wrong.

CHILDREN OF SIX YEARS.

1. Distinction between morning and afternoon.

"Is this morning or is it afternoon?" It should be remembered that a certain type of child will always answer the *last* of two alternatives. Therefore if the time is afternoon, it is well to put the question, *"Is this afternoon or morning?"* Not before six do children know this.

2. Definition of known objects.

"What is a fork? a table? a chair? a horse? a mama?"

There are three kinds of response. (1) Silence, simple repetition or gesture. *e.g.*, *"A fork is a fork,"* or pointing says *"That is a chair."* (2) Definition in terms of use, *"A fork is to eat with."* (3) Definition *better* than by use.

This includes all answers that describe the thing or even begin with *"it is a thing"*—*"it is an animal,"* etc., all of which expressions are not so childlike as the simple *"use"* definitions.

In deciding which type of answer we shall credit to the child, we accept three out of five. At four and a half the children define by *"use"*: it increases a little at five and at six practically all define this way. Not before nine do the majority give the definitions that are *"better than by use."*

3. Execution of three simultaneous commissions.

"Do you see this key? Put it on that chair. Then shut the door. After that bring me the box that is on the chair."

"Remember, first the key on the chair, then close the door,

FIG. 2.



Æsthetic comparison. Used for 6-year-old Binet test.

then bring the box. Do you understand? Well, then, go ahead." Such are the directions. They must all be done without further help, hint or suggestion. At four years almost none can do this, at five about half: at six all, or nearly all, succeed.

4. Right hand. Left ear.

One says to child "*Show me your right hand*" and when this is done, "*Show me your left ear.*" There are, in the main, three kinds of response. (1) Does not know right and left. Shows right hand because of natural tendency. Shows right ear also. (2) Knows but is not sure. Shows right hand, then right ear, but corrects himself at once. (3) Knows and without hesitation touches right hand and left ear. (2) and (3) are considered satisfactory. If child touches one hand with the other in such a way that one cannot tell which hand he means, ask him to hold his right hand up high. Be very careful in this test to give no hint by look or word. At four years no child points to left ear: at five half of the children make a mistake: at six all succeed.

5. Esthetic comparison.

"Which is the prettier?"

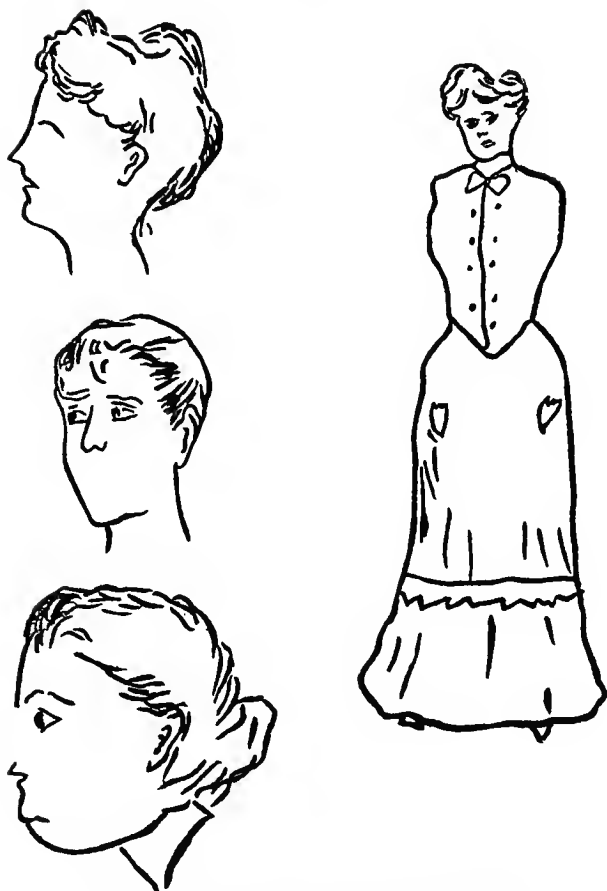
Binet uses six heads of women in three pairs, the one pretty and the other ugly or even deformed (Fig. 2). Care is taken that the pretty one is now at the left and now at the right. At six all choose correctly: at five about half.

CHILDREN OF SEVEN YEARS.

1. Counting thirteen pennies.

Pennies must be placed in a row and counted with the finger. Finger must touch the piece at the same time that the child names the number. No piece must be counted twice and none omitted. The number thirteen must be given exact. At six years two-thirds fail: at seven they make no errors.

FIG. 3.



Unfinished pictures. Used for 7-year-old Binet test.

2. Description of pictures.

Same picture as used in age of three. Child now *describes* things instead of simply enumerating.

3. Unfinished pictures.

One shows four sketches as Fig. 3. Ask the child "*What is lacking in that picture?*" Child must answer three out of four correctly. At five years none are correct: at six errors number two-thirds: at seven the great majority are accurate.

4. Copying a diamond.

Draw a rhombus about the size of the square used for age five. Have child copy this with pen. The result is satisfactory if it would be recognized as intended for a diamond-shaped figure.

5. Name four colors.

Use red, blue, green and yellow papers, in pieces about 1×3 inches. Touching each color with the finger ask "*What is that color?*" It will be seen this is a test of color names, not of discrimination. It should be done in six seconds.

CHILDREN OF EIGHT YEARS.

1. Compare two things from memory.

"*What is the difference between a butterfly and a fly?*" "*Wood and glass?*" "*Paper and pasteboard? (or cloth?)*" The question may be differently put so as to make it intelligible as possible, e.g., "*Why are they not alike?*" etc.

Two at least out of the three pairs should be answered correctly. If it takes more than two minutes it is a failure. At six a third of the children do this test: at seven nearly all: at eight all.

2. Count backward from 20 to 1.

This should be done within 20 seconds, and only one mistake allowed of omission or transposition.

3. The days of the week.

These must be given in order without omission within ten seconds. Most persons would expect that this could be done before the age of nine, but it cannot.

4. Count nine "Sous" (3 simples and 3 doubles).

(Our two-cent piece is now so rare that we use 1-cent and 2-cent postage stamps.)

Arrange in order, 1, 1, 1, 2, 2, 2. "*How much are they worth?*" (How much money to buy them?) "*Count.*" It should be done within ten seconds without any error.

There are three ways of counting. One child says 1, 2, 3, 5, 7, 9. Another says 1, 2, 3, 4-5, 6-7, 8-9. The third says, 1, 2, 3, 4, 5, 6, which is of course wrong. A large majority do this test at seven years; but all do it at eight.

5. Repetition of five figures.

"4-7-3-9-5." Same method of procedure as given above, age three. Only three-fourths of the children succeed.

CHILDREN OF NINE YEARS.

1. Make change—9 cents out of 25:

Play store, using real money. If child's cash consists of 25 pennies, 5 nickels, and 2 dimes, interesting degrees of intelligence will be discovered by noticing the coins he uses in making the change. Child is storekeeper. One buys something that costs 9 cents. Child must actually give 16 cents as well as say it.

At seven no one can do this test: at eight a good third succeed: at nine all do it. (See Revision.)

2. Definition better than by "Use."

This was explained under age six. At ages seven and eight half the children give definitions of this kind. At nine they all do.

3. Name the day of the week, the month, the day of the month and the year.

The test is passed even if the day of the month is as much as three days wrong. Children least often know the year.

4. The months of the year:

Recited in order within 15 seconds. Allow one omission or transposition.

5. Arrangement of weights:

Use five wooden cubes of same size and appearance but loaded so as to weigh 6, 9, 12, 15, 18 grammes. (Metal pill boxes may be used.) Place the five boxes on table in front of child and explain that they do not all weigh alike and he is to lift them one at a time and put them in order from the lightest to the heaviest. (The initial of each weight written on the bottom of each box makes it easy to see if they are right.) Record the exact order in which the child has placed them. Three trials are made. Two must be absolutely correct. The whole operation must not take over three minutes.

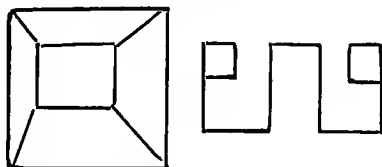
CHILDREN OF TEN YEARS.

1. Naming nine pieces of money:

One may use cent, nickel, dime, quarter, half dollar, dollar, two dollars and ten dollars.

Pieces should be on the table in a row, but not in regular order of value. Point with finger, and name as he points.

2. Draw design from memory:



3. Repeat six figures:
854726, 274681, 941738.
4. Questions of comprehension:

First Series.

What ought one to do:—

1. When one has missed the train?
2. When one has been struck by a playmate who did not do it on purpose?
3. When one has broken something that does not belong to one?

At seven and eight half respond correctly: at nine three-fourths: at ten all. If two questions out of three are answered correctly the test is passed.

Second Series.

What ought one to do:—

1. When he is detained so that he will be late for school?
2. What ought one do before taking part in an important affair?
3. Why does one excuse a wrong act committed in anger more easily than a wrong act committed without anger?
4. What should one do when asked his opinion of some one whom he knows only a little?
5. Why ought one to judge a person more by his acts than by his words?

Allow at least 20 seconds to each question. Three of the five must be answered correctly. At seven and eight no one responds to a majority of this second series: at ten half are successful; it is therefore a transition between ten and eleven years.

5. Using three words in a sentence:

Binet uses the words *Paris, fortune, river*. We should say *Philadelphia, money, river*. This is the first time in these tests that we have required a child to "invent" his own expressions. There are three forms of answers. (1) Three separate sentences. (2) Ideas united by a conjunction. (3) A single idea involving the three words. Only the last two are satisfactory for the test. We allow one minute. At eight no one succeeds. At nine one-third and at ten one-half get it right.

In this test may be seen a distinction between intelligence and judgment. Some children give a complete sentence with the three words but they do not make sense.

CHILDREN OF ELEVEN YEARS.

1. Criticism of sentences:

These are sentences that contain some absurdity or ridiculous expression. Binet explains that formerly he used sentences like "*Is snow red or black?*" but he found that many bright children fell into the trap and others through confidence in the questioner failed to look for an absurdity. Therefore he has changed the plan and now says to the child, "*I am going to give you some sentences in which there is some nonsense. You are to listen carefully and see if you can tell me where the nonsense is.*" Then he reads the sentence very slowly.

1. "*An unfortunate cyclist has had his head broken and is dead from the fall; they have taken him to the hospital and they do not think that he will recover.*"

2. "*I have three brothers: Paul, Ernest and myself.*"

3. "*The police found yesterday the body of a young girl cut into eighteen pieces. They believe that she killed herself.*"

4. "Yesterday there was an accident. But it was not serious: the number of deaths is only 48."

5. Some one said, "If in a moment of despair I should commit suicide, I should not choose Friday, because Friday is an unlucky day and it would bring me ill-luck."

The test should last about two minutes. Three at least of the questions should receive good answers. At nine years hardly any child gets them: at ten scarcely a fourth: at eleven a half.

2. Three words in a sentence:

(Given under ten years.) At eleven all succeed.

3. Sixty words in three minutes.

"Say as many words as you can in three minutes; as table, board, beard, shirt, carriage." We tell him that some children have named 200 words.

This test gives a splendid opportunity to appreciate the intelligence of a child. At least 60 words must be given.

4. Rhymes:

Explain what is meant by one word rhyming with another. Illustrate. Then ask for as many words as the child can think of, that rhyme with a given word, *e. g.*, *day*, or *spring*, or *mill*.

One minute is allowed. Three rhymes with one word should be found in the given time.

5. Words to put in order:

"Make a sentence out of these words."

Hour—for—we—early—at—park—an—started—the.

To — asked — paper — my — have — teacher — correct — the — I.

A—defends—dog—good—his—bravely—master.

Place the printed words before the child. He gives the sentence orally.

Time limit is one minute for each sentence. At least two must be given correctly.

CHILDREN OF TWELVE YEARS.

1. Repetition of seven figures:

2, 9, 4, 6, 3, 7, 5. 1, 6, 9, 5, 8, 4, 7. 9, 2, 8, 5, 1, 6, 4.

Tell the child there will be seven figures. Give three trials. One success is sufficient.

2. Abstract definitions:

"What is charity? Justice? Goodness?" Two good definitions must be given. It is often somewhat difficult to decide if the definition is passable. If it contains the essential idea it must be accepted, however badly it is expressed. At ten years a third succeed: at eleven they are generally successful.

3. Repetition of a sentence of 26 syllables.

(See revision for new sentence.)

This should be done without error.

"Children, it is necessary to work very hard for a living. You must go every morning to your school."

24 syllables.

"The other day I saw in the street a pretty young dog. Little Maurice has got spots on his apron."

26 syllables.

"Ernest is praised very often for his good conduct. I bought at the store a beautiful doll for my little sister."

28 syllables.

"There occurred on that night a frightful tempest with lightning. My comrade has taken cold. He has a fever and coughs very much."

30 syllables.

4. Resists suggestion.

5. Problem of various facts:

"What is it?"

(1) *"A person who was walking in the forest at Fontainebleau suddenly stopped much frightened and hastened to the nearest police and reported that he had seen hanging from the limb of a tree a ——"* (after a pause) *"what?"*

(2) *"My neighbor has been having strange visitors. He has received one after the other a physician, a lawyer and a clergyman. What has happened at the house of my neighbor?"*

Both questions should be answered correctly.

The answer to the first is *"a dead man."* Some object to this story as too gruesome. Others say that children are not so sensitive to such things as we think. Aside from that question it would seem that the picture is hardly familiar enough in America to make the answer certain. A substitute had better be found.

CHILDREN OF FIFTEEN YEARS.

Adult.

1. Cutting out:

Get the child's attention and let him see you fold a sheet of paper in four. Then with the scissors cut a small triangle from one edge—the edge which does not open. Ask him to draw a picture of the paper as it will look when unfolded. Do not unfold or allow another sheet to be unfolded. It is a difficult test. If a child does it the first time always ask him if he has seen it before.

2. The reversed triangle:

Cut a visiting card along the diagonal. Ask child to describe the resulting shape if one of the triangles was turned about and placed so that its short leg was on the

other hypotenuse and its right angle at the smaller of the two acute angles.

3. Differences:

Ask the difference between

Pleasure and happiness.

Evolution and revolution.

Event and advent.

Poverty and misery.

Pride and pretension.

4. Difference between President of a Republic and a King.

5. Give sense of a selection read to him.⁷

A Psycho-Physical Analysis.—We now come to the last stage of our mental diagnosis. Heretofore our examination has been concerned chiefly with general retardation and our efforts have been definitely directed toward determining whether the retardation so discovered was permanent or temporary. If, on the completion of the examinations for general retardation, the psychologist cannot fully make up his mind concerning the subject, and also in order further to locate the precise mental aberration in some particular process of consciousness the mental analysis is made.

⁷ Revision made by Henry H. Goddard, Vineland, N. J., Training School

For other systems of tests see: Whipple: *Manual of Mental and Physical Tests*. Warwick and York, Inc., Baltimore, Md., 1910.

Huey: *A Syllabus for the Clinical Examination of Children*. Warwick & York, Baltimore, Md., 1911. Warwick & York also supply record blanks for Binet tests in quantities of a dozen or more.

Healy and Fernald: *Tests for Practical Mental Classification*. The Psychological Review Co., Baltimore, Md., 1911.

White, Wm. A.: *Outlines of Psychiatry*, New York, 1911. Contains much on methods of examination and tests.

Report of Committee on Tests, American Psychological Association, 1910. Psychological Review Pub. Co., Baltimore, Md.

Manifestly such an analysis cannot be treated in full in this place. It would require a volume in itself. But a sketch of the questions and the tests with enough description to enable an examiner to make use of them in any clinic is appended. From this it will be seen that so elaborate and complex is the mental analysis that for examination at a psychological clinic too much time would be required for every case. Its purpose as noted above is to decide fully upon any doubtful case or to locate peculiar mental disturbances. It is, in a sense, a court of final appeal, and at the same time an instrument of searching clinic exactness which requires for its application an experienced examiner and a psychological laboratory equipped with its full quota of scientific apparatus.

In addition to this the mental analysis is a summation of all the clinical laboratory tests that may be needed to decide the condition of any child. The tests are made as full as possible with the idea not that they shall all be used in regular cases, nor possibly any of them used in one single case, but rather that the clinician may have before him in compendious form tests necessary for detailed examinations of particular mental processes.

REPORT BLANK

Mental Examination of Age . . . Examined . . . by

PART 1.—SENSATION AND PERCEPTION.

1. *Visual:*

- a. Acuity
- b. Heterophoria
- c. Fields of Vision and of Color Vision
- d. Color Vision
- e. Visual Perception Span

2. *Auditory:*

- a. Acuity.....
- b. Localization of Sound.....
- c. Range of Sounds Discernible.....
- d. Auditory Perception Span.....

3. *Tactile:*

- a. Acuity.....
- b. Localization of Stimulus.....
- c. Localization of Movement of Stimulus.....
- d. Sensitivity to Tickling.....

4. *Pressure:*

Acuity:

- 1. Least Discernible Difference.....
- 2. Pain Threshold.....

5. *Thermal:*

Acuity:

- 1. Least Discernible Difference.....
- 2. Pain Threshold.....

6. *Kinæsthetic:*

Acuity.....

7. *Gustatory:*

Acuity.....

8. *Olfactory:*

Acuity:.....

 PART 2.—REPRODUCTIVE MEMORY.
1. *Immediate Memory Span.*

- a. Articulate Sound Combinations.....
- b. Visual Symbols for Articulate Sound Combinations.....
- c. Color.....
- d. Musical Sound.....
- e. Form.....

2. *Retentiveness.*

PART 3.—APPERCEPTION.

1. *Passive Apperception or Association.*

- a. Train of Thought.....
- b. Word Association Reactions.....
- c. Emotional Reactions.....
 - 1. Superficial.....
 - 2. Physiological Changes Accompanying Emotional States.....

2. *Active Perception.*

- a. Sustained Attention to Intellectual Work.....
- b. Voluntary Attention.....
- c. Attention to Disparate Activities.....
- d. Discriminative Attention.....
- e. Active Imagination.
 - 1. Linguistic.....
 - 2. Invention.....
- f. Reason.....

PART 4.—VOLITIONAL MOTOR ABILITY.

1. Control of Muscles while in fixed position:

- a. Body.....
 - b. Hand and Arm.....
2. Accuracy of Movement.....
 3. Steadiness of Movement.....
 4. Speed of Movement.....
 5. Fatigue—Muscular.....
 6. Reaction Time.....

a. Simple Reactions

- 1. Light.....
- 2. Sound.....
- 3. Touch.....
- 4. Electricity.....

b. Compound Reactions

- 1. Discrimination.....
- 2. Choice.....
- 3. Cognition.....

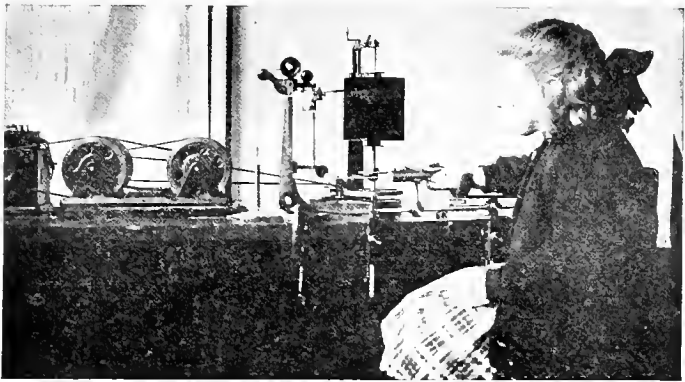
TESTS FOR MENTAL ANALYSIS.*

PART I. SENSATION AND PERCEPTION.

Tests.	Materials Required.	Directions for Testing.
1. Visual. (a) Acuity.	E Test Card (F. A. Hardy, Chicago). Trial frame for lenses. One $- .75$ and one $+ .75$ D. lens. One blank disc.	Place subject six metres in front of test card, which should be hung on a well-illuminated wall and on a level with the S.'s eyes. Tell subject that whenever you point to an E he is to show in which direction the prongs point by pointing in the same direction. Put trial frame on S., adjust nose piece and place blank disc before left eye. Point to several E's in line No. 7. If these are correctly seen the vision is normal and is recorded R. E. I. If they are not seen clearly point to larger E's on lines 6 to 1 recording vision as $\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, or $\frac{6}{10}$ as indicated on card. If none of the E's can be clearly seen the eye is practically blind and its vision is recorded as —. Now place the $+ .75$ D. lens before the right eye. If this blurs the vision the eye is emmetropic. If it enables S. to see smaller type the eye is hyperopic. To the first record should be added the degree of acuity with this lens, i.e., V. R. E. = $\frac{1}{10} + \text{Hy } \frac{1}{10}$. If vision is less than 1 and the $+ .75$ D. lens blurs it, remove the lens and substitute the $- .75$ D. lens. If the subject can now see smaller type, the eye is myopic and a



Testing the color zones of the eye with the perimeter.



Child tested by the ergograph. An instrument for measuring muscular co-ordination, attention, and power of endurance.

record of its acuity with this lens should be added, *i. e.*, $V.R.E. = \frac{1}{10} + My \frac{1}{10}$. Remove lens, point to radiating lines at head of test card and ask S. which line looks the blackest.

Have him tilt head and ask him whether the same line looks still the blackest. If it does not, astigmatism exists and this fact should be added to the record. $V.R.E. = \frac{1}{10} + My \frac{1}{10} + As$. Repeat tests using left eye (adapted from Whipple).

(b) Heterophoria... Trial frame, Maddox Rod, blank disc, and candle.

Place lighted candle 6 metres from S. and on a level with his eyes. Adjust trial frame to centre lens, place blank disc before left eye and Maddox Rod with bar in horizontal direction before right eye. S. should see a long, narrow vertical streak of red light. Remove blank disc and tell S. to state at once whether the streak seems to pass through the candle flame. If it does there is no heterophoria. If it is seen to the right of the flame esophoria exists and if to the left exophoria. Now turn the rod until the bar runs vertically. The streak should now appear in a horizontal direction. Remove disc and streak should be seen as passing through flame. If it is seen below the frame right hyperphoria exists, if it is seen above left hyperphoria. (Adapted from Whipple.)

* For the elaboration of these tests I am greatly indebted to Dr. Clara Harrison Town, Psychologist at the Lincoln State School and Colony, Lincoln, Ill., who used the tests both in her own work and at the Psychological Clinic. The arrangement of the tests is based upon Dr. Witmer's Analytic Psychology.

PART I.—SENSATION AND PERCEPTION.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
(c) Fields of vision and of color vision.	Perimeter.....	Cover left eye of S. and place him before perimeter in position to focus with right eye on the little mirror. Place arc of perimeter in horizontal position. Gradually remove the small white disc from the extreme right of the arc toward the centre and record degree marked on arc when disc is first seen by S. Repeat process bringing disc toward the centre from the left, from above, from below and also on the diagonal meridians. Repeat process with the yellow, blue, red and green discs. Using recorded distances plot a chart of the visual fields for white and for each color. Repeat tests using left eye.
2. Auditory (a) Acuity.....	(1) The McCallie Audiometer.... (2) Whisper Test. The following list of words: High pitched,—twenty, thirty-six, sixty, seven,	This instrument is practically a Politzer acoumeter placed in a sound-proof box through which the sound escapes by way of an opening the size of which may be varied, and is carried to either or both ears by rubber tubes. It can be used in a smaller room than the acoumeter and under noisier conditions. Directions accompany the instrument. The words should be heard when whispered at a distance of 6 metres. S. should stand with ear toward experiments and other ear plugged.

Each ear should be treated separately. If S. is unable to hear whisper use ordinary tone, first in low voice and then loud if required. Inability to hear high pitched words indicates nervous deafness. Inability to hear low pitched words indicates disease of conducting apparatus.

Place S. in a chair, blindfold him. Make a sharp metallic noise with snapper above head, back of head, front of head, and on either side. Each time sound is made ask S. where it is and record both correct position and S.'s answer.

The fork of 50 vibrations gives a tone of very low pitch, but one that should be heard by every normal ear. The tone one octave below this is of doubtful audibility. The forks of 200 and 500 vibrations give tones in the middle register. The Galton Whistle gives the highest pitched tones discernible.

Sound forks by striking one prong at about $\frac{1}{4}$ distance from the top a clear tap of moderate strength with hammer.

The directions for using the Galton Whistle accompany the instrument.

Sound snapper 2, 3, 4, 5, 6, 7, 8, 9, and 10 times.

Also group sounds in 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 groups of two sounds each, thus the group of nine will contain 18 sounds. Present these two series in irregular order and record the number of sounds made and the number S. thinks he hears.

sisters, Swiss, ice, fleece, sense, hissing.
Low pitched,—five, one hundred, Robert, brothers, organ, to-morrow, pump, doctor, wound, bound.

Metal Snapper

(b) Localization of sound.

(3) Tuning forks—50, 200 and 500 vibrations.
Rubber-topped Hammer.
Galton Whistle.

(c) Range of tones discernible.

Metal Snapper

(d) Auditory perception span.

PART I.—SENSATION AND PERCEPTION.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
3. Tactile (a) Acuity.....	Jastrow's Improved Æthesiometer.	Seat subject before a table, have him roll his sleeves up above the elbow and rest forearm on the table volar side uppermost. Show him the æthesiometer and tell him you are going to touch him sometimes with one point, sometimes with two, and that he is to pay strict attention and tell whether he is touched with one or two points. Screen arm from his view. Begin with points far apart (90 mm. on scale), give a ready signal, then bring the points down simultaneously on the middle of the forearm parallel with its longitudinal axis. Let them rest there by their own weight for about two seconds, allowing the holder to slide one or two cm. down the stem of the instrument. Repeat the process, gradually decreasing the distance between the points and occasionally using the one point as a check test, until a distance is reached where subject makes 8 correct judgments in 10. This is recorded as his limit for perception of two points on volar surface of arm. This may be repeated on different parts of body if desired. (Adapted from Whipple.)

(b) Localization of stimulus.	Jastrow's Improved Aesthesiometer.	Seat subject as for previous tests, screen arm and touch with one point of the aesthesiometer various places on forearm, asking S. to touch same spot with the tip of finger. Record amount of error for each judgment and secure an average of ten judgments.
(c) Localization of direction of stimulus.	Jastrow's Improved Aesthesiometer.	Seat subject as for previous test, screen arm and draw points of aesthesiometer over arm from wrist to elbow, from elbow to wrist, from right to left and from left to right. Record S.'s judgments of the direction of moving touch stimulus.
(d) Sensitivity to tickling.	Feather	Tickle with feather and note muscular reaction.
4. Pressure: (a) Acuity. (1) Least discernible difference.	Set of weights all of the same size and material, weighing 10, 11, 12, 15 and 20 gm. respectively. Set of weights all of the same size and material, weighing 100, 101, 102, 105, and 110 gm. respectively.	Use 10 gm. weight as a standard, the others in series as comparison weights. Place 10 gm. weight on S.'s outstretched palm. Let it remain there for two seconds. Remove it and place comparison weight in its place. Direct S. to say immediately either heavy or light as his judgment of second weight. Repeat process until the standard weight has been compared with the other four twice, once given as first weight of pair, once as last. Record judgments. Repeat process with second series of weights.

PART I.—SENSATION AND PERCEPTION.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
(2) Pain threshold..	Cattell Algometer	Tell S. that you are going to press the palm of his hand and that he is to tell the first moment that it hurts him, that he is not to speak when it first feels uncomfortable, nor to wait until he can no longer bear the pain, but to tell at once when it begins to cause actual pain. Record pressure indicated by scale. After the first pressure the pain limit will be lowered for that spot.
5. Thermal: (a) Acuity. (1) Least discernible difference.	Thermaesthesiometer	The instrument consists of two thermometers fastened together with electrical arrangements for changing the temperature of one of them. This one is heated until the difference in temperature of the two is about 10°. Both are then placed on the volar surface of forearm and held there until the difference in temperature is imperceptible. The difference, in degrees, of the temperatures of the two thermometers is then recorded as a limit for discrimination of temperature on the forearm.
(2) Pain threshold for heat.	Thermaesthesiometer	Increase temperature of thermometer until S. reports that it is just causing pain. He must be directed not to speak when it merely feels uncomfortable, nor to wait until he can no longer bear it, but to tell the moment he feels any real pain.

6. Kinæsthetic: Acuity.	Two series of weights as described in tests for acuity of pressure.	S. is directed to lift weights with thumb and first finger. A standard weight is placed on table directly in front of him, he lifts it and immediately puts it down. It is at once replaced by another. He lifts this and says heavier or lighter as his judgment of the second weight. The process is then repeated until standard weight has been twice compared with the four others, once as first of pair, once as second. The order of presentation must be varied, <i>i.e.</i> , standard must not be used as first of pair with all the weights and then as last with them all.
7. Gustatory: Acuity.	Salt, sugar, quinine, vinegar	Blindfold S., place a little of each on his tongue, asking him to describe the taste as sweet, sour, salt or bitter.
8. Olfactory: Acuity.	Ammonia, asafoetida, tobacco, coffee, cheese, camphor, peppermint, turpentine.	Let S. smell one at a time and name, if possible, if not describe odor.

PART II.—REPRODUCTIVE MEMORY.

1. Immediate memory span: (a) Articulate sound combinations.	Cag, mef, dit, nar, sos, guk, kim, pev, tab.	Recite series of nonsense syllables. Have subject repeat them. Repeat process as many times as proves necessary for S. to learn them. If 9 syllables are beyond S.'s memory span reduce number.
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PART II.—REPRODUCTIVE MEMORY.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
(b) Visual symbols for articulate sound combinations.	Gaf, zer, pux, rbo, dib, jom, riw, yak, kem.	Have nonsense syllables written plainly on cards and expose series serially. Have subject repeat them. Repeat process until S. has memorized the list. If 9 syllables are beyond S's memory span, reduce the number.
(c) Color	Five skeins of worsted—red, blue, pink, yellow and orange. Skeins of worsted, assorted colors.	1. Show skeins of five different colors, then cover them and ask S. to name the colors he has seen. 2. Show skeins of five different colors, cover them and ask S. to pick out five like them from a pile containing skeins of many colors.
(d) Musical sound.		Sing or play a few notes of a melody, and ask S. to reproduce it.
(e) Form.	Two wooden cubes, cylinders, spheres, pyramids, cones and parallelepipeds.	Show S. cube, cylinder or sphere. Cover them and show him a group of models, among which are duplicates of the first. Ask him to pick out the models just seen.
2. Retentiveness.....	Nonsense syllables as given above.	Have subject learn nonsense syllables by method outlined in immediate memory tests, and tell him that you will ask for a recitation on the following day. Note how many have been forgotten in the 24 hours, and the number of errors in position of series. If impossible to see S. twice, give immediate memory test early in the interview and call for a recitation of syllables at its end.

PART III.—APPERCEPTION.

Tests.	Materials Required.	Directions for Testing.
1. Passive apperception or association. (a) Train of thought.	Narrow strips of paper (4 in. by 14 in.). Lead pencil, stop watch.	Supply subject with paper and pencil and direct him to write a list of words, one word on each line; to write <i>every</i> word that comes into his mind without pause or selection. Impress upon him that he is to make no choice of words, but to write whatever comes to his mind and to write as quickly as he can. Have him write for fifteen minutes and note his progress at the end of each five-minute period. The subsequent analysis of such a list gives much data on the quality and rate of thought, the mode of association and the mental content. Full directions for such analysis are too technical to be given here.
(b) Word reactions.	A list of 100 words 1. dog 2. hand 3. ocean 4. friend 5. spring 6. wrong 7. case 8. gun 9. custom 10. enjoyment 11. despise 12. home 13. reward 14. theatre 15. clean 16. freedom 17. yellow 18. bird	The words are used as stimuli. S. is instructed that when he hears a word he is to say <i>at once</i> the word that it brings up in his mind. Before pronouncing the stimulus word a ready signal should be given. The reaction word is recorded, also the time which elapses between the utterance of the stimulus word and the utterance of the response. For exact time results it is necessary to have some form of apparatus which will mechanically register when the stimulus word and the response word are

PART III.—APPERCEPTION.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
19. money 20. sleepy 21. music 22. blood 23. dream 24. plant 25. hesitate 26. funny 27. secret 28. number 29. beauty 30. happy 31. tree 32. electricity 33. man 34. jewel 35. needle 36. butterfly 37. time 38. fire 39. news 40. crime 41. picture 42. copper 43. death 44. sport	45. creator 46. long 47. people 48. silk 49. medicine 50. future 51. American 52. poverty 53. laugh 54. good 55. recreation 56. lover 57. country 58. above 59. ship 60. dance 61. constant 62. table 63. coat 64. business 65. pain 66. stupid 67. work 68. youth 69. knife 70. lily	uttered. A satisfactory method is to obtain an electric response to the spoken words by means of a very delicate telephone transmitter and relay, a Pfeil signal recording on a kymograph. A time line simultaneously marks on the kymograph $\frac{1}{10}$ second intervals. For less exact time results a stop watch recording $\frac{1}{2}$ seconds is used. This is a crude and inaccurate method, but is often useful when access to a laboratory and appropriate apparatus is impossible.

71. power	86. success	Time recording apparatus: 1. Chronoscope, 2. Kymograph, metronome with electric contact set to make contact every $\frac{1}{10}$ second. 3. Stop watch. Telephone connections for use with either chronoscope or kymograph, two Pfeil signals.	Show pictures and note emotional reaction as betrayed in facial expression, speech and manner.
72. face	87. name		
73. Christian	88. story	Pictures designed to provoke mirth, sorrow, sympathy, anger and fear.	
74. forget	89. hypnotist		
75. meeting	90. late	(c) Emotional reaction. (1) Superficial.	
76. key	91. nature		
77. innocent	92. tired		
78. mother	93. grow		
79. square	94. call		
80. loss	95. life		
81. travel	96. drink		
82. suggestion	97. marriage		
83. nurse	98. trick		
84. true	99. crowd		
85. danger	100. woman		

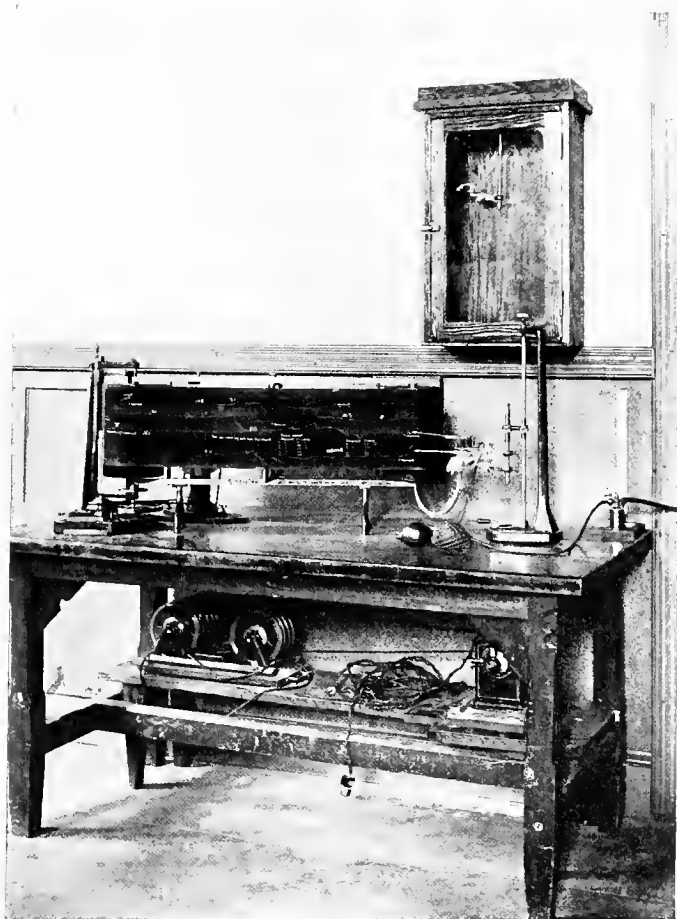
PART III.—APPERCEPTION.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
(2) Physiological changes accompanying emotional states.	Plethysmograph, sphygmograph, pneumograph, kymograph, rubber tubing, tambours, Pfeil signal and other accessories.	Secure plethysmograms, sphygmograms and pneumograms from subject while he is experiencing some emotional excitement, and note character of curves, comparing with those obtained in passive state. As these tests can only be made by one experienced in the technique of such experimental work, description of method is not given.
2. Active apperception.		Direct subject to add columns as quickly as possible. Record time and errors.
(a) Sustained attention to intellectual work.	12 columns of ten one place numbers.	
(b) Voluntary attention.	Similar materials as used in previous tests.	Repeat former tests, reading or talking to subject while he is counting. Record time and errors and compare with the results of previous experiment.
(c) Attention to disparate activities.	Some reading matter, paper, pencil and stop watch.	Direct subject to read aloud for 30 seconds. Record number of words read, then have him read for same length of time new matter of same degree of difficulty and write simultaneously as many a's as possible. Continue this process, using new reading matter each time, and each time adding one or more letters until subject's limit is reached. Record number of

(d) Discriminative attention.	A. blanks. These contain lines of printed letters, arranged without definite order and contain among them 100 answers. Q. blanks. (Stoelting & Co., Chicago.)	errors made in the writing and number of words read. Subject must read and write continuously, not write in pauses of reading. It is possible to write the whole alphabet without error and without pause in reading. Give subject blank and direct him to mark out with pencil every answer. Record time, errors and omission.
(e) Active imagination. (1) Linguistic.	Prepared blanks containing mutilated texts (words and parts of words omitted). (Stoelting & Co., Chicago.) Three words: citizen, horse, decree (nouns), remember, put, depart (verbs).	Same directions, substituting question for answer. Give subject blank and direct him to fill in the omission as quickly as possible. Record time and errors, also note confidence and intelligence. Write as many sentences as possible containing the three words, citizen, horse, decree, in five minutes. The same, substituting remember, put, depart. The three words must appear in each sentence.
(2) Invention....	Problem: A man has five short chains of three links each. Show how he can put these five pieces together into one long chain by using only three weldings. (Ter-man.) Five wire chains, 3 links each.	Place before S. the five small chains. Have him solve problems. Record time and stages of process.

PART III.—APPERCEPTION.—*Continued.*

Testa.	Materials Required.	Directions for Testing.
(f) Reason	$\begin{array}{r} 9xx)4xxx4x7(xxxx \\ x9xx \\ \hline x1xx \\ 4xx5 \\ \hline 2x7x \\ xxx4 \\ \hline x0x \end{array}$ Problem: A ball is lost in a round field where the grass is so tall that you can see only ten feet on each side of you. Show what path you would take in looking for the ball. (Terman.) Pencil and paper.	Have subject solve problem, supply numbers for all the x's without changing any of the given figures. Record time and method of procedure. Direct subject to trace this figure without taking pencil off or going over a line twice. Note time and number of failures, also method of procedure. Direct subject to solve problem illustrating his findings. Record time and method.



The record made by the plethysmograph and the pneumograph on a roll of smoked paper.

PART IV.—VOLITIONAL MOTOR ABILITY.

Tests.	Materials Required.	Directions for Testing.
1. Control of muscles while in fixed position. (a) Body.	Ataxiograph	A skull cap topped with a light board on which is fastened a sheet of paper is placed on the head of the subject. He then stands under a projecting metal rod to which is fastened, pointing downward, a pencil. The height of rod is adjustable and must be fixed for each subject at such a height that the pencil point just touches the paper. S. is instructed to stand perfectly still, and any swaying will be traced on paper. Time of test, 60 seconds.
(b) Hand and arm.	Steadiness tester. (Whipple.) Kymograph and connecting apparatus.	Instrument consists of a brass plate pierced by nine holes, varying in size. Subject holds a metallic needle in holes during a period of 15 seconds. The instrument is so connected with electric sounder and writing lever that each time the needle touches the rim of hole, a sound is made and the lever records on the revolving drum of a kymograph. Begin with largest hole and test control first with right hand, then with left, allow 30 seconds rest, then repeat with next size hole. Continue until a hole is reached which is the limit of S.'s

PART IV.—VOLITIONAL MOTOR ABILITY.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
2. Accuracy of movement.	Prepared blanks containing ten crosses irregularly arranged. (Whipple.) Metronome.	ability. This instrument may be used to test control of arm and hand, or hand alone by varying position of arm and supporting it at various points. Mount blanks on board with name space in lower right-hand corner and hang it on wall in a line with S's shoulder. Let S. stand with right shoulder in front of target at such a distance that his pencil just touches target when his arm is extended. Set metronome at 69 and tell S. he is to strike at target in time with the beat of the metronome, striking on one beat, bringing back pencil, until it touches shoulder on next beat, then striking again. He is to aim at each cross once, beginning with the one in upper left-hand corner and continuing in regular order until tenth is reached. This process is twice repeated, but in the second round the order is reversed. Repeat process with left hand, using a fresh blank. Measure errors with mm. rule and find the averages and mean variations. S. should be given a little practice before experiment is begun.



The plethysmograph, for recording fine variations in emotions, is the cylindrical apparatus with its several rubber tubes. The pneumograph is the apparatus strapped to the boy's chest and records variations in breathing.

3. Steadiness of movement.	1. Tracing board. (Whipple.) Kymograph and connecting apparatus. 2. Maze blanks (Columbia University).	On tracing board are two strips of metal placed to form narrow slit between. Metallic stylus is held in hand, wrist and arm unsupported. S. draws a line with it on the glass between strips of metal. The instrument is so connected with electric sounder and writing lever that each time the stylus touches the metal a sound is made and a record made on the kymograph. Nine seconds are allowed for complete tracing. Allow three preliminary trials to accustom S. to the rate of movement desired. As soon as a contact is made, S. stops, and begins again with other hand. Five trials are made with each hand. Movements may be made toward or away from the S. from right to left, or from left to right. Variations in test may be made by supporting the arm at elbow or at wrist. In using Maze blanks, have S. draw a line between the parallel lines on a blank. The line must be continuous and be a free-arm movement. Record number of times line touches either printed line.
4. Speed of movement.	Telegraph key. Two Pfeil signals. Seconds pendulum or other apparatus so arranged as to give electric contact once a second or oftener. Kymograph.	Seat subject at table, let forearm rest comfortably on the table and hand be in position to tap telegraph key. Have key connected with Pfeil signal in such a manner that at every tap a record is made on the revolving drum of kymograph. Have pendulum connected with other signal in such a way that a record is made every second. The combined records will show how many taps are made per second.

PART IV.—VOLITIONAL MOTOR ABILITY.—*Continued.*

Tests.	Materials Required.	Directions for Testing.
5. Fatigue—muscular.	Ergograph, kymograph, metronome.	Have S. tap for 30 seconds. Test both hands, having S. use the index finger. Place right arm of subject in arm rest, adjust weight to suit subject, choosing one which is quite heavy for him to lift (7 per cent. of subject's weight is given by Whipple). Set metronome to give one stroke per second and instruct S. to pull weight up on one stroke and release it on the next. This will give one lift in two sec. Instruct S. to continue until he is unable to pull weight. Let him rest 5 min. and repeat process, rest 5 min. more and repeat again. The writing lever of the ergograph registers the extent of each pull on the revolving drum of the kymograph. The extent is also measured by the endless tape attached to ergograph. Multiplying the weight used by the tape record will give the amount of work done, and the graphic record will show the rate of fatigue.
6. Reaction time. (a) Simple reactions (1) Light. (2) Sound.	Chronoscope. Apparatus for producing stimuli of the kinds noted. Telegraph key.	Apparatus for producing stimuli and telegraph key are connected with chronoscope in such a manner that chronoscope begins to record when stimulus is produced and ceases when

- (3) Touch.
(4) Electricity.

- (b) Compound re-
actions.
(1) Discrimina-
tion.
(2) Choice.
(3) Cognition.

reaction is made. Thus a reading of the dial will give time that has elapsed between production of stimulus and S.'s reaction. Two signals are given before production of stimulus, "ready" to warn subject to attend and "now" immediately before presentation. The reaction consists in pressing telegraph key. Subject is directed to press key as soon as he receives the stimulus. He is told what kind of stimulus will be presented.

Discrimination. Subject is told that either of two stimuli will be given, and that he is to react to one only which is designated. For instance, either black or white will be shown and he must react only to white.

Choice. Subject is told that either of two stimuli will be given, that he is to react to both but with different fingers; for instance, if white appears he is to touch key with first finger, if black with second.

Cognition. A more complicated stimulus is given for this, a word or something which S. will have to identify. He is directed not to touch the key until he identifies stimulus.

NOTE.—For the formulation of the above tests, I am largely indebted to Dr. Clara H. Town, Psychologist at the State School for Feeble-minded, Lincoln, Ill. The arrangement is based upon Witmer's Psychology.

VIII.

MORAL DEVIATES

No cases presented at the Psychological Clinic are so difficult to classify as those brought on account of bad conduct. The whole problem of moral delinquency and incorrigibility is plunged into the deepest confusion, not only on account of its own inherent difficulties, but also on account of related problems concerning morality, moral responsibility, the soul, the nature of sin, crime, evil and the punitive or preventive measures to be adopted toward the transgressor. All of these questions, though perhaps not directly related to the problem of classifying bad boys and girls, nevertheless thrust themselves with the proverbial impudence of immorality upon the clinicist's attention. The traditions of society, the organization of penal and reformatory institutions and the prejudices of guardians, teachers, and moral reformers, compel him to take cognizance of them. If he is wise, he will at the very beginning, as far as possible, clear away the mass of irrelevant and confusing material surrounding this task and fix upon some clear and practical fundamental notion for his guidance. He may begin by formulating two salient questions: What is moral imbecility? How shall it be diagnosed?

What Writers Say of Moral Imbecility.—To answer the first question, and thereby secure some basis for replying to the second, the clinicist must turn to a study of what writers have said upon the subject and especially upon the possibility of finding moral imbecility in minds otherwise sound.

Pinel, according to Prichard, was the first to propose the theory that some persons seem morally irresponsible though intellectually capable. "I have already had occasion to observe that the existence of moral insanity as a distinct form of derangement has been recognized by Pinel. . . . Pinel terms this affection '*emportement maniaque sans delire*.'"¹ "These are mad men," the latter writes: "in whom there is no perceptible alteration of the intellectual process, of the perception, judging faculties, imagination or memory, and yet a perversion of the manifestations of the will in a blind impulse to the commission of violence or even bloodthirsty rage, without any assignable dominant idea in delusion of the imagination which would cause such propensity."

Dr. Benjamin Rush,² writing in 1830, and also referring to his own lecture of 1810, apparently agrees with Pinel, as he mentions a disease called "moral derangement," which discovers itself only in the moral Rush faculty, and exists with a sound state of the conscience and sense of duty." He believes that "the will is diseased and acts reflexly or convulsively."

Prichard,³ writing in 1835, believed that a defective moral sense was sometimes co-existent with a perfectly normal intellect, and first used the term moral Prichard insanity which included both impulsive insanity and moral insanity and imbecility, the former being applied to those cases of exceptional acts of irrational violence, the latter to those cases characterized by habitual and

¹ Pinel, *Traite Medico-Philosophique sur l'alienation mentale* 2 me. edit. Paris, 1809, p. 156. Quoted by James C. Prichard in *Treatise on Insanity*, 1835, pp. 4, 14.

² Benjamin Rush, *Medical Inquiries and Observations upon the Diseases of the Mind*, 1830, pp. 261, 262.

³ James C. Prichard, *Treatise on Insanity*.

unresisted selfish, sensual, and egotistic acts. This distinction between the exceptional and the habitual is significant, but, as we shall see later, it is not sufficient to differentiate the true moral imbecile from a persistent yet corrigible sinner.

His remarks, for their historical richness, are worth quoting fully, but we cannot do more than give the following summary.

Of the symptoms he says:

"The modifications of insanity already mentioned are affections of the understanding or rational powers, but there is likewise a form of mental derangement in which the intellectual faculties appear to have sustained little or no injury, while the disorder is manifested principally or alone, in the state of the feelings, temper, or habits."

Then he adds his definition of moral insanity as follows:

"*Moral insanity*, or madness consisting in a morbid perversion of the natural feelings, affections, inclinations, temper, habits, moral dispositions and natural impulses, without any remarkable disorder or defect of the intellect or knowing and reasoning faculties, and particularly without any insane illusion or hallucination."

Seguin,⁴ the pioneer and apostle of education for mental defectives, curiously enough says nothing specifically, in his publication of 1866, about moral imbeciles, though he clearly indicates his belief in a moral nature among idiots, and leans to the opinion that their cruelty and viciousness are frequently due to bad environment or bad training. A few quotations will show his view:—

⁴ Edw. Seguin, *Idiocy*, 1866, pp. 64, 65.

“That the idiot is endowed with a moral nature, no one who has had the happiness of ministering to him will deny. Epileptic, paralytic, choreic, or imbecilic children will often strike or bite their mother or affectionate attendant. If any idiot is found doing the same (and we never find any) he must have been taught it by some cruel treatment imposed upon him. In general, as soon as his mind is open to reflection, the tender family feelings are so deep in him that they often interfere with his successful transplantation into the broader and richer ground of our public institutions. It is true that his habits are sad, droll, or repulsive, that his doings are often worse than none; but these manifestations exhibit as much the carelessness and want of intelligence of the parents or keepers as they do the primary character of the infirmity.

“As a collective body, idiot children are, in their institutions, equal in order and decency, in true lovingness, if not in loveliness, to any collection of children in the land. Their normal powers are influenced by isolation, company, multitude, silence, turmoil, music, human eloquence, as they are in all masses of mankind. If we are asked how we pretend to see all these good and promising dispositions in the unfortunate subject whom we have depicted as more or less motionless, speechless, and repulsive, we can affirm that the idiot, even when neglected in his lowest conditions, does not manifest any character contrary to the one here described; a character which we have seen him assume steadily and uniformly, under the influence of proper training, and, as we firmly believe, in virtue of his own moral nature: he is one of us in mankind, but shut up in an imperfect envelope.”

Maudsley,⁵ in his works of 1868, 1871, 1876 makes
 Maudsley moral insanity an independent mental disease,
 describes its symptoms, and refers it back
 chiefly to heredity.

Under the head of affective insanities of early life, he speaks of moral insanity and moral imbecility. The cases described as illustrative of both classes are quite similar, differing chiefly in that the moral insanity is a temporary state, while moral imbecility is a permanent one. Moral imbeciles, he says are instinctive liars and thieves; they are entirely lacking in all natural affection and their one impulse is self-indulgence. For selfish gratification they will resort to all sorts of cunning, which indicates good mental power.

"The eminent men," he says in another place, "who have studied insanity, and whose authority we habitually accept, are entirely agreed as to the existence of a form of mental disorder in which, without any hallucination, illusion, or delusion, the symptoms are exhibited in a perverted state of those mental faculties usually called the active and moral powers or included under feeling and volition—the feelings, affections, propensities, temper, habits, and conduct. . . . When moral insanity is thought to exist by itself, and to constitute the disease, as it certainly may do, it would be quite unjustifiable to assume that a particular vicious act or crime, or a series of vicious acts, proved its existence; in the previous history of the patient there will be evidence of a sufficient cause of disease having been followed by an entire change of manner, of feeling, and acting. The vicious act or crime will be logically traceable through a chain of symptoms to

⁵ The Physiology and Pathology of the Mind. Henry Maudsley. 2nd Ed. 1868, pp 356-365; 1871, pp. 311, 312.

disease as cause, as the acts of the sane man are traced or deduced from his desires and motives. 'There is often,' says Dr. Prichard, who first called attention to this form of mental derangement, 'a strong hereditary tendency to insanity.'"

D. Hack Tuke,⁶ in his "Dictionary of Psychological Medicine," published in 1892, begins his article on Moral Insanity with Prichard's definition and sums it up with a few statements to which he attaches a Tuke brief bibliography. He agrees very decidedly with the theory of moral deficiency without intellectual impairment, and suggests the difficulty of diagnosis in these words:

"Each case must be decided in relation to the individual himself, his antecedents, education, surroundings, and social status, the nature of certain acts, and the mode in which they are performed, along with other circumstances fairly raising the suspicion that they are not under his control."

Dr. Kerlin,⁷ however, was the first to classify moral imbeciles as a distinct type, a type that he included with those who displayed grave moral defects, whether Kerlin associated with the mental defect or not, but adds that moral imbecility is often associated with mental defect. His biographer says:

"He was among the first to recognize the existence of the class . . . the members of which are not responsible for their birth or inheritance, though often of more than precocious intellect. . . . He first mentioned them in his report to the managers in 1884. In his report of 1889,

⁶ D. Hack Tuke, *A Dictionary of Psychological Medicine*, 1892.

⁷ Forty-first Annual Report of the Pennsylvania Training School for Feeble-minded Children, Phila., 1893, pp. 49, 50.

Dr. Kerlin says that at last these unfortunates, moral imbeciles, seem to have come under easier recognition than formerly. . . . He says:

“To those who have any doubt of the existence of a distinct class, the discussion of the recent International Congress of Criminal Anthropology in Paris would be a revelation, and a practical acquaintance with the inmates of the institution a conversion.”

His classification will be given later, in connection with Barr's consideration of this subject.

Shuttleworth⁸ agrees with Kerlin in stating that a slight intellectual deficiency sometimes accompanies moral imbecility and adds that the intellectual capacities of such individuals may improve while their moral condition deteriorates. He believes that:

“Perhaps the most trying cases we are called on to deal with among children mentally abnormal—there is in this instance often but little intellectual deficiency—is that of the moral imbecile. . . . He (or she) may combine the most innocent, sometimes engaging, external appearances with an inner depth of cunning and iniquity which requires to be experienced to be appreciated. The sudden impulses to mischief occurring in these cases are probably of an epileptoid character, and paroxysms may sometimes be cut short by bromides. But as a rule moral discipline is of little avail; punishment may be administered, and professions of penitence called forth, only to be forgotten as soon as the mental disturbance again recurs. The author has a vivid recollection of three nice-looking children, sisters and brother, formerly under his care, who at times would appear models of propriety, while at others

⁸ Shuttleworth, G. E., *Mentally Deficient Children*, London, 1900, pp. 126 ff.

they had all the characteristics of little demons. With innocent expressions they would furtively accomplish the most abominable mischief, and after meekly acknowledging the error of their ways would emphasize their apology by a missile flung at the head of the person who had attempted to bring them to repentance. Such children would in olden times have been called 'possessed'; now they are classified as cases of moral imbecility or juvenile insanity. Dr. Samuel J. Foet⁹ has described similar cases under the title of 'Psychical Epilepsy.'"

Kellogg¹⁰ defines moral degeneracy both etiologically and symptomatologically, and connects it usually with inheritance. He calls it: "A distinct form of mental disease, arising from a constitutional neuropathic state ordinarily inherited, though exceptionally acquired, and characterized by deficiency of moral understanding or perversion of the emotional nature by brutal instinctive tendencies, and by shameful conduct unrestrained by any sense of right or wrong, or by any self-respect or fears for others." Kellogg

The symptoms of this neuropathic state are emotional perversion, vanity, selfishness, absence of altruistic feelings, like pity, sympathy, and natural affection, and a volition too weak to withstand the fierce impulses of animal passions.

William H. Ireland¹¹ is of the opinion that moral imbecility is always accompanied by some slight abnormality of intellect, although such defect may seem out of all proportion to the moral degeneracy. Ireland

⁹ Proc. Association Amer. Institution for Idiotic and Feeble-minded Persons, 1894, p. 400.

¹⁰ Kellogg's Text Book of Mental Diseases, 1897, pp. 555 to 560.

¹¹ Wm. H. Ireland, Mental Affections of Children, 1900, pp. 287, 288.

Berkley¹² states that imbecility may be shown by moral obloquy not necessarily accompanied by other signs of weak-mindedness. He recognizes two types of the high-grade imbecile: the one very deficient mentally, and the other with one-sided but active mental development. This latter class is as a whole defective morally. They possess a low cunning and propensity for every kind of crime, coupled with a facility in language and a sharpness of apprehension.

Dr. Tredgold¹³ believes, "There may be one class of persons who are so constituted that they are utterly devoid of any real moral sense, and of the consciousness that any obligation is morally due from them to their fellows; just as others may have no sense of religion or no conception of the beauties of form, color or sound. Such defect is inherent, and it may rightly be called moral deficiency.

"Its relation to criminality, however, is another matter. It may be that, although these persons have no feelings of repugnance or shame at the thought of a criminal or immoral act, and although they cannot appreciate the ethics of the Decalogue, nevertheless, their intelligence tells them that certain unpleasant consequences, in the shape of judicial punishment or social censure, will follow transgression, and this suffices to keep them within the prescribed legal and social code. Their moral defect is, in fact, latent. . . . But although latent moral defectives of this kind are not of necessity actual criminals, they may well be described as potential criminals. . . .

"But the case is different with another class. There are

¹² Berkley, Henry J., *Mental Diseases*. New York, D. Appleton and Co., 1900.

¹³ A. F. Tredgold, *Mental Deficiency*, London, 1908, pp. 76 ff.

some persons, likewise deficient in moral sense, who repeatedly commit criminal acts, and upon whom punishment has not the slightest deterrent effect whatever. These form a large proportion of the instinctive or habitual criminal class, the true moral defectives, and they may be defined as 'those persons who display from an early age, and in spite of careful upbringing, strong vicious or criminal propensities on which punishment has little or no effect.'"

Tredgold's definition is essentially that of the Royal Commission, reported as follows: "The moral imbecile is a person who by reason of arrested development or disease of the brain dating from birth or early years displays at an early age vicious or criminal propensities which are of an incorrigible or unusual nature, and are generally associated with some slight limitation of intellect."¹⁴

Then the Commission adds a very valuable distinction between moral imbecility and moral insanity in these words: "Of another class also—the morally insane—definitions were suggested to us. The definition of the Royal College of Physicians was as follows: '*Morally insane person* means a person who, after many years of reputable life, all at once unaccountably exhibits vicious propensities, or takes to criminal courses.' Sir James Crichton-Browne's definition is—'A morally insane person is one who by reason of disease or disorder of the brain has undergone a change of character manifested in a course of vicious or criminal conduct without obvious impairment of intellect.' These definitions connect themselves not with the retardation of the brain which manifests itself at birth or in the twelve years of life, but with

¹⁴ Report of the Royal Commission on the Care and Control of the Feeble-minded, vol. viii, 1908, p. 189.

disorder of the mind at a later date, or 'acquired.' The morally insane are thus included in the definition of 'Persons of Unsound Mind' in Recommendation IV. And we do not consider it scientifically correct to constitute them into a separate category."¹⁵

A Summary of the Opinions on Moral Imbecility.—This short historical sketch serves to illustrate the confusion spoken of in the first part of this chapter. The tendency of writers is clearly toward belief in moral deficiency as a distinct disease of human character, though the symptom-complex and the etiology are more or less vaguely defined. Undoubtedly some of the earlier writers were misled in their treatment of the subject by traditional views of morality which led them into comparatively unimportant attempts to prove the existence of moral imbecility. The result of their efforts is valuable to the clinicist chiefly in proving to him the futility of looking for a peculiar symptom-complex, by which he may diagnose a case. To show what he should look for, he must begin by laying aside preconceived opinions of morality and making a brief and simple analysis of moral standards.

Three Systems of Morality.—*What constitutes morality?* is a question subsidiary but necessary to our main inquiry, and it may be at once affirmed that to it no absolute, universal valid answer can be given. In his "Method of Ethics," Professor Henry Sidgwick shows by a study of common sense or popular opinion that no single and simple method of determining right and wrong is in use, but that many methods of ethics are put forward as equally universal and equally valid. All of these he be-

¹⁵ Report of the Royal Commission on the Care and Control of the Feeble-minded, vol. viii, 1908, p. 190.

lieves can be reduced to three systems. The first he calls "Egoistic Hedonism" and its fundamental principle is, "Let each one seek his own greatest happiness," or, to be more accurate, "The greatest surplus of pleasure over pain." The second he calls "Universal Hedonism," or "Utilitarianism," the fundamental principle of which is, "Let each one seek the greatest happiness of the greatest number." The third system, called "Intuitionism," is the traditional morality, or morality in its narrow sense, the only kind considered by many as morality at all. Its fundamental principle is: "Do right for right's sake," and the rightness or wrongness of any act is believed to be immediately or intuitively perceived by the "moral sense."

This moral sense, in germ at least, is innate. It is potentially there at birth. At some particular time in the life of an individual it develops. Then the person, ^{Moral Sense} according to popular opinion, becomes morally responsible; that is, this moral sense, either intuitively and immediately in any particular case, or immediately from moral principles intuitively known, instructs the person in what is right and what is wrong. Along with the moral sense conscience develops. It is an impulse in consciousness urging one toward what his moral sense tells him is right and away from what it tells him is wrong, and rewarding him with a warm glow of approbation for duty well done, or pursuing him with remorseful pangs for transgressions committed.

With this brief analysis before us we are now in a better position to define our standards of true morality and hence of moral imbecility. Our next step is to reduce the three foregoing methods or systems of ethics to psychological terms.

Two Psychological Systems of Morality.—The first two systems obviously depend upon purposes or ends for the determination of right or wrong. If an egoist is confronted with two alternatives he must determine which one will lead him to the greater happiness. He must reflect, judge, reason. Likewise the utilitarian must choose his means to his end. The difference between the two systems resides in both the motives and the ends. The egoist's motive is self-love, and his aim self-pleasure; the utilitarian's motive is love for mankind and his aim their happiness. Both systems—to whatever they may be reducible in an ultimate analysis—involve a certain amount of reasoning and are therefore called rational systems of ethics. A person bereft of reasoning powers could never be guided by either method in his knowledge of right or wrong or in his choice of good or bad conduct.

The third system differs both ethically and psychologically from the other two. The moral sense upon which it depends for clear and valid enunciations of right and wrong is by its nature a feeling of certainty. The conscience through which the immediate edicts of this moral sense are rendered operative in conduct is by its nature and development an instinct or a group of instincts, one of the many with which man is richly endowed. The intuitive system, therefore, can be called instinctive.

Thus all morality may be said to be rational or instinctive. This statement, be it remembered, must be taken with our practical task of diagnosis in view. Not for a moment is it urged that such a brief analysis is satisfactory for settling all moral problems. It is made solely and simply to give the practical clinician a clearer view of his problem, to let him know in some measure what he faces

when he must diagnose a case of moral imbecility. For this purpose the conclusions, it is hoped, are sound and valid.

Possible Varieties of Moral Imbecility.—From our ethical and psychological analyses we have arrived at the following results. Moral imbecility is a term that depends for its content upon the point of view of the speaker. His ethical theory determines for him the meaning of moral imbecility. The intuitionist insists that a normal moral being shall possess a moral sense and a conscience. Any one who is deficient in these respects is, by his definition, a moral imbecile.

From the egoist's point of view the matter may be entirely different. For him an individual with no moral sense may still be morally normal. If he were able, without a moral sense, by reasoning alone to elect the proper means to his own best self-satisfaction, he would be moral. He would believe, however, that if a person had no self-regarding impulses whatsoever or was distinctly deficient in that respect, he would of necessity be a moral imbecile. If, further, he did possess normal self-regarding impulses but had not sufficient reason to choose means to his own happiness, he would be morally imbecilic.

Between the intuitive and the egoistic views paradoxical situations might arise. An individual could very well exist who, in the intuitive sense noted above, might be a born moral imbecile and yet develop into a moral man. Though he could never decide intuitively upon the rightness or wrongness of any particular act, and so would technically be a moral imbecile, yet he might not be a bad fellow at all. He might have intelligence enough to learn how to attain his own ends in his social group without any offence to his neighbors. His whole scheme of conduct

would be based upon intelligent self-interest, perfectly moral to an egoist and perfectly non-moral to an intuitionist. He might, of course, be a hard subject to guide into virtuous paths, but in the end he might be developed into a more consistent life than his so-called normal brother, born happily with the usual moral sense, and trained with the usual poor methods.

The matter changes once more with the utilitarian. The moral imbecile would now be one who is deficient in other-regarding impulses. Love, sympathy, benevolence, and the social instincts in general, might be remote from his comprehension. Lacking these fundamental human attributes he could not make a perfect utilitarian. Yet he might possess docility enough to learn how to cover his deficiencies by discovering what other people wanted and reason enough to choose the right means to supply them.

For instance, he might lack sympathy, and so never be able to put himself in the place of any one else, to feel the sympathetic vibration of his own soul at the sight of suffering of others, to weep with those who weep, or laugh with those who laugh. If, however, he has mentality enough, and could learn in a cold, calculating way what emotions to simulate, what actions to avoid, and what to perform, in order to fit into his group of society, although he would be decidedly lacking in what would be the usual moral equipment of a normal individual, yet by society he would not be counted a moral imbecile, because he possessed mentality enough to learn to simulate moral acts. For after all, under certain conditions, society is extremely lenient toward the motives of its members, though many casuists, no doubt, would insist that such a calculating machine could not, for one moment, be called a moral being. Yet even to them it

Utilitarian
Moral
Imbecile

might be argued with some show of truth that such a painstaking imitation of virtuous conduct deserved greater merit than the natural, spontaneously growing variety.

On the other hand, lack of intelligence need not produce a utilitarian moral imbecile. A man lacking a moral sense, and without full reasoning powers, might be so liberally endowed with social instincts and so free from selfish or destructive impulses that his conduct would be always in sympathetic accord with his fellows, or at any rate, because of the impotence of his egoistic impulses, not in discord with them. Such a person would make a perfectly agreeable, though rather stupid, member of society. Far from being accounted a moral degenerate, he would most probably live and die with a reputation for remarkable goodness. Every psychiatrist is acquainted with such a moral creature,—spineless, passive, amiable, safe from evil as long as they are well sheltered in innocent surroundings.

Still one more point of view remains. That is the way in which society at large looks upon the matter. Here the motives of conduct fall somewhat into the background. The emphasis at least is upon social or anti-social acts. If the conduct is of long duration and special perversity, society begins to suspect that something is wrong with the mentality of such an individual, may engage in more or less speculative concern about it and so bring the moral judgment of the community to bear upon the man's motives. But on the whole the incident of supreme importance is what he does, not what he feels or what he thinks. As long as his actions do not cause social disturbances of certain degrees or kinds, they are passed over as not of sufficient importance to demand any serious attention. Generally speaking, the point of view of society as a whole is a strange mixture of the three

Social
Point
of View

ethical methods noted above, with legalistic opinions and criminal codes thrown in. When a case arises wherein both moral sense and reason are patently lacking, popular opinion pronounces it a genuine and indubitable case of moral imbecility. A concrete case will illumine this point.

A Case of True Moral Imbecility.—For the sake of vivid illustration the child chosen is strikingly defective even in the fundamental similarities between people which make them one family. He is not only idiotic and utterly animal, but deficient even in a sensibility to pain or pleasure. Lest the imagination of the reader be overtaxed, we will describe an actual case:¹⁶

“A teacher of a special class in one of our large cities had an extreme case of almost animal grade, a small boy who when given a knife for kindergarten work promptly slashed his neighbor’s hand; next, struck a boy over the head with his hammer; and when reduced to one pair of blunt scissors exercised his little mentality by nipping a piece out of a girl’s hand. All of this might be set down to ignorant mischief, though that is hardly a tenable hypothesis considering the age of the boy and the discipline and instruction used in the first case of cruelty. The real situation, namely, a complete indifference to pain on his part, was revealed by an accident which happened one morning upon his arrival at school. He came in much excited, eyes fairly dancing with delight, and in almost insane glee exhibited to the shuddering class his bloody hand all ragged and torn by the teeth of a dog with which he had had an encounter on his way from home. How could it be possible for such an insensate being to feel sympathy for

¹⁶ *The Psychological Clinic*, vol. iv, No. 4, June 15, 1910, p. 113.

others? How could he take anything but delight in the bloodshed of others when he himself found it literally the most exquisite torture of his benighted existence?"

In such crude and vicious cases as the above there is no difficulty in diagnosis, though it might be worth while to remark in passing that the American school system, at last accounts, did not exclude this young savage from the special class. In other cases, where the pain inflicted is purely mental, popular judgment may not be so sure, but the underlying psychology of the operation is identical and the nature of the inflictor certainly abnormal.

In order to clarify our conclusions we may sum them up in a few sentences.

1. The question whether moral imbecility exists alone, or always in conjunction with mental deficiency, is still unsettled. There is no clear and definite symptom-complex by which the diagnostician may immediately recognize moral imbecility by its manifestations.

2. Moral imbecility, according to theorists, may be either congenital or developmental.

3. The bad conduct of the moral imbecile is an habitual expression of his character, and not occasional or exceptional.

4. It may be due to a lack of moral sense or of other social instincts.

5. It may be due to a lack of a moral sense or social instincts and reason.

6. The moral instincts may be wanting, but reason may be able to guide the conduct of the defective so that he does not break out into open criminality.

7. Moral imbecility may express itself in all degrees of bad conduct, and co-exist with any degree of mental defect.

8. A true moral imbecile is incorrigible. His disease is incurable, his character irreformable, and his conduct unchangeable.

Tredgold's View.—In this conclusion, to which we have come by an analysis of the literature of the subject, we find ourselves in essential agreement with Tredgold, who classifies moral imbecility as latent and actual; and moral imbeciles as potential and actual criminals, and defines the imbecile as “a person who displays from an early age, and in spite of careful upbringing, strong, vicious or criminal propensities, on which punishment has little or no deterrent effect.” This definition tacitly or expressly includes the following characteristics of the disease. Heredity is hinted at as a cause in the first clause; lack of social instincts or the perversion of other instincts is indicated in the ‘strong vicious propensities’; conduct comes out in the term ‘criminal’; and the disease is considered incurable by punishment or, presumably, by other forms of moral discipline or education. Heredity, conduct and prognosis are all-important, therefore, in diagnosis.

On the nature of the disease itself, from the internal or psychological viewpoint, the same writer says, in substance, that some persons “are utterly devoid of a moral sense,”¹⁷ but their intelligence keeps them from actual criminality. These are real moral imbeciles and potential criminals. Another class likewise deficient in moral sense is the instinctive or habitual criminals who may or may not be defective in intellect, their cunning influencing us to one opinion, but their insensate and irrational persistency in conduct certain to bring punishment inclining us

¹⁷ A. F. Tredgold, *Mental Deficiency*, 1908, p. 76.

in the other direction. With these classifications, as far as they go, we are in entire harmony, as our analysis and summary show.

With this statement of the case we close this part of our discussion and turn now to apply our theoretical knowledge to the task of diagnosing moral deficiency and classifying moral defectives.

We are now in position to estimate the results of our investigation into the history and analysis of the ordinary notions concerning morality by applying them to the classification of the moral delinquents brought to the clinic. The investigation has not cleared up all the concepts connected with classification, but it has done much. It has shown that nothing in the immoral conduct itself is sufficient to determine moral imbecility. Moral imbecility may or may not be associated with an intellectual defect. It is inherent either in defects or the instincts or the reason, according to the ethical point of view. The point of view is all-important to the clinician. His very first practical task is to orientate himself.

How the Clinician Should View a Moral Delinquent.

—What shall be his point of view? From what angle shall he regard his problem? From the point of view of intuitive morality, of egoism, of utilitarianism or of society in general? First, he should remember that he is not called upon to determine the morality of any act of the delinquent, much less the validity of any moral system or code. Neither is he to determine the morality of the child if a distinction between the child and his act can be made.

Motives and Conduct.—Secondly, he is not concerned wholly nor primarily with motives, but is concerned with them just in so far as they throw light upon the psychological condition of the delinquent and in so far as they

bear upon the probability of future repetition of the same acts. To this extent they must be considered.

Moral Responsibility.—Thirdly, he need not be concerned at all with moral responsibility except again in so far as moral responsibility bears upon the continuation of the delinquent's conduct, or unless the clinician is giving an opinion eventually affecting the legal status of his subject. Otherwise, he can adopt a view of moral responsibility which appears to be perfectly true as far as it goes and which will at the same time free it from any confusing elements. An illustration will make this view clear. Suppose that two men lay in wait for two other men and slew them. At the trials of the two homicides it is brought out that the same motives were at the root of both crimes, and that the criminal acts were precisely similar. Both victims had grievously injured their slayers. Both slayers planned their revenge, lay in wait for their enemies and slew them with similar weapons. Yet at the trial one man is pronounced a murderer and sentenced to be hung, while the other is adjudged morally irresponsible and confined to an insane asylum for life. Now what is the essential difference between these two cases? Why is one man called morally responsible and the other man morally irresponsible? As far as the psychological clinician is concerned he can assume that the difference lies in this simple fact: the morally irresponsible man is one whose future actions cannot be controlled by the thought of punishment to which he may be liable for bad conduct or the thought of rewards which he may gain by good conduct. In other words, he is not *morally* bound to any course of action and hence must be *physically* restrained. The problem of the clinician then, as far as it regards moral responsibility, is the determination of the simple but very

difficult question as to whether the particular delinquent can be restrained from bad conduct in the future by the fear of punishment or the hope of reward; or whether he must be physically restrained from committing criminal acts. Beyond this, it is almost needless to say, the clinician need not concern himself with such metaphysical questions as theories of determinism and free will.

The position taken here that responsibility for wrongdoing is in reality a knowledge more or less vague of the consequences of a criminal act is in harmony with that presented by Dr. Tredgold¹⁸ and summed up in his quotation from Mercier, "A man may know that his act is wrong without knowing how wrong it is."

This kind of moral responsibility should be recognized by all those dealing with mentally defective persons, as it is by all others in their treatment of animals. For no sensible person would hesitate to punish a thieving cat caught with its head in the cream pitcher; but the same person would not dream of visiting useless and cruel pain upon a cat three days after it had devoured the pet canary.

Some people, like animals, might be limited to such a low grade of intellect that the memory of past punishment or the conception of prospective punishment would be too weak to deter them from prohibited acts. Certain ones might be found with so short a memory-span that misdeeds bringing upon them immediate and severe punishment would be committed over and over again because the remembrance of the punishment—although severe, recent, oft repeated and following immediately upon transgression—would still not be vivid enough

Limited
Moral Re-
sponsibility

¹⁸ A. F. Tredgold, *Mental Deficiency*, 1908, p. 76.

to prevent the repetition of the same deed as often as the temptation was presented. Such a person would be called morally irresponsible, meaning by that term that his future conduct could in no wise be determined by moral suasion, punishment or rewards.

Still other individuals might possess a memory somewhat better organized so that only those comparatively minor misdeeds not invariably or immediately visited with condign punishment would be forgotten. Hence, though both classes of delinquents would technically be moral imbeciles, the delinquencies of the latter would not be vicious enough in the eyes of society to classify them as such. A rich man's son might in spite of occasional punishment persistently pilfer small sums of money at home, and nothing be thought of it. Yet if another youth followed exactly the same course in a bank it would seriously reflect upon his moral soundness.

The viewpoint which the clinicist must retain firmly and clearly in his mind is essentially that of society in general. He must not, for the time being, be an intuitionist, egoist or utilitarian. He must not, in the narrow sense, even be a moralist. He must reduce motives, moral responsibility, freedom of the will and such otherwise and otherwise important matters to the minimum required by his investigation. He must concern himself primarily with conduct. All other facts and fictions of morality must take a position relative to this finally fundamental factor. From this point the clinicist must begin the diagnosis of his case.

As far as the conduct of any moral delinquent is concerned, it may present no exceptional or peculiar form of badness. It is true that he may be cruel, but cruelty, at a certain age in a boy's life, is so common that it may be called

normal.¹⁹ This particular boy may steal, but stealing, likewise, is almost universal among boys. He may be disobedient; he may lie; he may play truant; or he may swear, or smoke or chew tobacco, and on occasion drink to excess, but all of these actions, single or in combination, after a long and intense persistence may suddenly cease, and the individual may reform and live afterward a perfectly clean moral life. Consequently, from the symptom-complex alone, it cannot be certainly concluded that any case of moral delinquency is permanent or temporary.

What is true of conduct is equally true of physical appearance. In spite of the attempts made by Lombroso and his school to mark the "born criminal" by unmistakable stigmata, the fact still remains that stigmata alone have no more value here than they have for the classification of mental defectives. Even manifestations of mental and emotional aberrations, as we have seen from our investigation above, do not in themselves and by themselves give a basis for determining that any particular individual is hopelessly immoral.

Hereditary Influences Based upon Statistics Will Not Help.—When we attempt to go deeper than the symptom-complex, or the external expressions of moral imbecility, to ground our judgments in any particular case upon general principles of etiology, we are again confronted with the difficulty that general principles based upon statistics will not apply to individual cases. That is to say, while it may be possible to tabulate statistics of the percentage of moral degenerates that will spring from morally degenerate or imbecile stock, it by no means follows that any particular individual can be pronounced a

¹⁹ Havelock Ellis, *The Criminal*, 1890, p. 130.

moral imbecile from heredity alone, nor can it be predicted with any certainty that particular parents like A and B will have particular children like *a* and *b* who will be morally deficient. If we turn away entirely from mental or hereditary causes of moral deficiency—granting that such may exist—and seek for brain lesions, we again meet precisely the same difficulty as in the classification of mental deficiency, namely, that it is just as difficult to diagnose a cortical lesion as it is to diagnose moral imbecility.

In the face of these obstacles what then shall the clinician do? He cannot stand still and speculate regarding the matter. It is not an abstract or an academic question. He is confronted with a condition and not a theory. The condition of any moral delinquent presented to him clamors for some practical solution. The parents of the child and society at large demand that some disposal shall be made of the delinquent, and unless the clinician can classify the bad girl or boy presented to him, and upon the basis of that classification advise the best procedure in each instance, he can offer no good reason for his existence.

Consider for a moment the situation that confronts him. First, it must be remembered that every child brought to the psychological clinic is brought for some specific purpose. Secondly, the delinquent is brought usually because of a long career of mischief or crime. To this extent he is already classified, and, like his brother the mental deviate, is placed in the class of abnormal, unusual, or atypical children by his friends and parents. Therefore the psychological clinic has adopted the name of "moral deviate" for all such cases. This perfectly colorless word was chosen simply to signify that the individual has departed from the customary standard of morality to such an extent that he is finally brought to the clinic for a more serious

investigation into his moral status than can be given by his unskilled parents, guardians, teachers or friends.

Having made this one step towards classification, we are now immediately confronted with another, just as general in its nature, and just as important. This concerns the purpose for which the child is brought to the clinic. It is contained implicitly in the question upon the lips of the ones who bring him, "Can you do anything for this boy?" Or, to put it in other words, "Is this boy temporarily or permanently bad?" Or, in still better terms, "Is he corrigible or incorrigible?" This question brings the clinicist to the practical problem already met in the classification of mental deviates.

All Moral Deviates are Corrigible or Incorrigible.—Just as we have classified all mental deviates as curable or incurable, so we may now divide the moral deviates likewise into two groups:—the temporary, curable, reformable or corrigible deviates, and the permanent, incurable, irreformable, degenerate, morally imbecilic, or incorrigible deviates. All these terms are used in popular description, but in order to make our terminology exact and conformable to the divisions already laid down in previous chapters for mental deviates we will call the first corrigible, and the second incorrigible deviates.

Such classification has many objections as well as many advantages. For the practical purpose of the psychological clinic we believe the advantages far outweigh the disadvantages. It has the virtue of simplicity; it is practical, effective and significant. The assignment of the child to one class or the other determines his disposal, his future training and his treatment. If he is corrigible, it is immediately the duty of his guardians to bring to bear the training or discipline necessary to correct his badness.

If, on the other hand, he is incorrigible, the fact must be taken as final, and it must be understood that physical restraint in some institution is the one means of preventing this potential criminal from developing into an actual criminal, and not only becoming a menace to society himself, but becoming also the parent of like offspring.

It also eliminates a great many controversies concerning motives, absolutism or relativity of moral standards; the moral sense and moral responsibility, and places the emphasis just where it belongs—upon conduct. For after all what parents and society are vitally concerned in are the actions of the individual; that is, either his actual criminality or his actions that indicate a potential criminality. After the emphasis is once properly placed, all the other factors, like deranged mentality, cortical lesions, heredity, stigmata, etc., fall into their proper relationships. Each one will now furnish some significant information to the clinician, and aid him in deciding the permanent condition of the child.

The Method of Further Classifying Moral Deviates.
—The further problem of diagnosing children of this class and the method of discovering their condition are not widely different from that pursued in the case of mental deficiency. Neither is the normal training vastly different from the physiological education adaptable to the former class. "We have seen more than once," says Seguin, "how the moral treatment was blended with the physiological training. We shall see very soon the same element acting like a leaven in labors, occupations, pleasures, or claiming its control over food, clothing, hygiene or medical attendance. We find it everywhere; and it would be writing the same book over again from another

standpoint to describe the working of this training in all parts of the treatment."²⁰

We will now take up specifically the method of deciding whether any case of moral deviation is corrigible or incorrigible. In order to make the method clear we will sketch a bird's-eye view of the whole process. We here traverse again the fairly familiar ground of mental classification and its methods. First the oral examination is made of the parents or guardians of the child for the purpose of securing a narrative of his life history, including especially a detailed account of his conduct and of any causes that may have brought about his moral deficiency. From the personal history of the child we pass backward to the family history, making note of any hereditary influences that may appear. After the oral examination comes the usual physical examination for the purpose of disclosing the presence of removable defects or permanent stigmata. Then the mental examination follows, revealing the presence of any defect in mentality. To these reports a sociological investigation may be added, for neighborhood, home-life, and moral training have often a great deal to do with moral incorrigibility.

The Oral Examination.—That part of the oral examination which recites the boy's bad conduct is uppermost in the parent's mind and of great import to the examiner. Although this has been the occasion for bringing him to the clinic, it must be remembered that no matter how long and how persistently followed has been the course of bad conduct, this in itself is not enough to prove the child morally incorrigible. For it is not the persistence of the conduct but "the dangerousness of the criminal that

²⁰ Idiocy and its Treatment by Physiological Method, E. Seguin, N. Y., 1866, p. 54.

counts" here as elsewhere. Inquiry must be carefully made into the nature of his acts to ascertain their relation, first, to the impulses or instincts giving rise to them; and secondly, to the purpose or end that was intended to be accomplished.

If there is a strange perversity that seems to lead the child to do things that are anti-social,—if he steals, for example, and seems to be utterly destitute of any ability to distinguish between the ordinary acts of appropriation that are forbidden and those that are permitted, —it may indicate not that the individual has stronger acquisitive instincts than the normal person, but that he is so perfectly destitute of respect for others' rights, or of fear for consequences to himself, that no counter motives are present to hold his instincts in check. Therefore he steals whenever the opportunity occurs. He steals for the love of taking,—an impulse normal to all,—and for the mere delight of permitting a strong impulse to express itself. In such a case the one problem for the clinicist is to discover whether the child has mentality enough to learn by the severe consequences which will inevitably follow his thieving propensities that he must not give them indiscriminate play. Such a condition appears to be exemplified in the following description of a peculiarly long and stubborn case of badness.

C. P., a boy twelve years old, was first brought to the clinic on August 9, 1907, on account of persistent stealing. A few days after his birth the boy suffered from a ruptured eye, the scar of which he still bears. He was a nervous, restless baby and at fifteen months old was attacked by convulsions, which disappeared after circumcision. Between the ages of two and three years he contracted scarlet fever and diphtheria together, from the effects of

Perverse
Conduct

which he nearly died, and before he had fully recovered from this illness he developed pleural pneumonia. At an early age he showed a disposition very unlike that of his brothers and sisters. Although he saw them accept their share in the work, he would not do anything about the house unless paid for it. He was absolutely untrustworthy and early began to steal from his parents. One example among many will serve to illustrate this trait. The family have several cherry trees on their lawn, and when cherries are ripe the boys in the family pick the fruit for their mother to preserve. C. appropriated what he picked, and took them to the village and sold them. Later he extended his thieving operations to the neighbors. At one time he purloined a five-dollar bill from a pocketbook in a house where he went to visit, spent part of it, and when accused of the theft buried the remainder in an ash-heap. His pilferings were unremitting, full of cunning, and as varied as the means taken to prevent them. He was positively unhappy when not carrying on some thieving exploit, and became kind, pleasant and agreeable when engaged in the worst mischief. When detected, he would first deny and then confess his acts, and promise reformation. These spells of contrition, however, appeared to be mere passing moods. The incentive for the boy's continued thieving came out in his inordinate appetite for sweets and cigarettes. Reward, exhortation and punishment were alike unavailing. When locked up in a room he yelled and threw things out of the window until his frightened mother released him.

The physical examination at the clinic showed that the boy, although small, was rather well formed, excepting for his shallow chest, suggestive of adenoids. A slight deafness was evident, his mouth was kept slightly open,

A Persistent
Thief

his left nostril was occluded, and indications of anæmia, signs of nervousness, and slight general malnutrition were present.

Instructions for gymnastics to correct his bad posture were carried out, and in addition, on July 10th, he was taken to the eye clinic, where he received a prescription for glasses to be worn constantly to correct hyperopia. On July 17th his adenoids and tonsils were removed.

After all these physical defects had been attended to, C. was returned to his parents, and in August of the same year his mother reported that he was much improved not only in general behavior, but in disposition. He had become more considerate, and was willing to do his share in the work; he did not seem so nervous and sought a distinctly better class of friends.

In January, 1909, a different report came to the clinic. C. would, for a space of time, conduct himself properly and then give way to a "fit of stealing." He obtained goods at the store on account, sold them, and spent the money in various forms of amusement. He lied continuously, and smoked all day long. In partnership with his brother, he was started in the business of selling eggs. By earning money legitimately, the parents hoped that their son would be able to cast off his bad habits of appropriating other people's property in order to satisfy his appetite for sweets and cigarettes. The boys bought eggs from a farmer in the country, and sold them in town at considerable profit. C.'s business ability appeared keen enough, but even with these opportunities open to him, his dishonesty still cropped out. He would secure quantities of the eggs from the farmer, sell them, receive the cash, and then spend the money without paying the farmer.

Finally the business was closed out, the parents being compelled to pay what money was still owed.

All this, of course, tended to confirm a belief in the boy's incorrigibility. Finally, almost by accident a piece of family history came to light which gave the whole matter a new cast. It was discovered that the mother's father had led a dual life, and had once failed in business under very suspicious circumstances. The mother's sister had left home in her youth, developed unchastity before marriage, and later had been divorced, though she afterward settled down into domestic life. The mother's aunt—her father's sister—married a sailor, who left her and her son, and she was also somewhat wild. The mother's own mother had contracted a drug habit which led her to take any means to satisfy the craving. The father's aunt had a son who went hopelessly insane, and is now in an asylum.

Such a history immediately gave the boy's conduct a more sinister meaning, but did not settle the case. It did, however, lead to the first steps toward incarcerating the boy in a penal institution where he would no longer be able to take advantage of neighbors and friends. Whether from fright or from some better motive is not known, but from that day C.'s conduct changed. His reformation was marked and lasting. He ceased all stealing; later on secured a place in a large mercantile house, went to school at night, showed complete fidelity in his work and diligence in his studies, and to-day holds a good position in a newspaper establishment.

Personal History of the Moral Deviate.—If in addition to a long line of perverse conduct it is discovered that the delinquent has been affected with some disease almost certain to leave some mark upon his mentality, it

is safe to assume that both conduct and disease taken together indicate incorrigibility, and especially if the bad conduct has had its inception immediately subsequent to the attack of illness. The diseases to be looked for here are the same as those noted in our study of mental defectives, the assumption being that the intellectual faculties have been so injured that the sufferer cannot set moral sanctions before his mind clearly enough to hold his anti-social instincts in check, or, in other words, to perform rational acts of conduct.

What is true of disease is equally true of injuries. Any falls, injuries, blows upon the head or other physical shocks should be investigated with the case, but Diseases and Injuries should not be given too much weight, unless the series of bad actions begin immediately after such injuries. Even then the decision cannot be final. We had one case (No. 95) at the Psychological Clinic, in which a boy showed a most vicious tendency toward every form of bad conduct, including truancy, insubordination at school, swearing, lying, stealing, threats to kill his parents, or such acts of violence as throwing knives at those with whom he became enraged, and the inception of all this evil temper dated from an accident in which he was thrown against a large stone with such violence that blood exuded from his nostrils and ears. The mother confidently pronounced this to be the cause of all his badness, and in the opinion of teachers and others this accident, which seemed to turn the boy from a fairly good son into a demon of mischief, marked the beginning of what had developed into moral degeneracy. A careful clinic examination, however, revealed a history of diphtheria just after the fall, the presence of adenoids, a deflected nasal septum causing almost complete occlusion of

one nostril, enlarged tonsils, poor vision, impaired dentition, entire deafness in one ear, and general malnutrition. With the exception of the diphtheria, and possibly with the exception of the deafness, which may have been caused by the blow against the rock, but which more probably was due to catarrh, all these defects were conditions of fairly long standing, which had gradually increased in their intensity and had become eventually sources of such intense irritation that the boy appeared to be morally incorrigible.

If the cause lies in the surroundings it is usually due to bad neighborhood, bad home or lack of training. In such cases, theoretically at least, the case is corrigible. An illustration of this condition is offered in the happy termination of the career followed by a bad boy suspected at one time of being a moral imbecile.

M. R., Case 423, was a boy of eleven years when brought to the clinic in December, 1911, on account of moral delinquency. He had been for a year and a half in the care of a missionary society where he had been placed by a judge in a neighboring city, partly because R. ^{A Case of Bad Environment} had been detected in stealing fruit from a fruit stand, and partly to take him away from the influence of a bad brother. While under the care of the society he had been placed in three or four homes and schools with indifferent results. At none of the homes had his conduct been satisfactory. He had been guilty of misdeeds which had been described in such a way as to leave grave doubts in the minds of his guardians as to his moral soundness. A close examination into the nature of his acts, however, which were said to be exceedingly vulgar, revealed no tendency which could not be attributed to his home environment or his circumstances.

His people were Swiss and, as far as can be learned, on his father's side the grandparents are respectable and hard-working people. His mother's grandparents, however, had lived a "pretty rough life." The grandfather was a scissors-grinder, and he and his wife wandered about the country doing odd jobs. Their daughter, the mother of the boy, is a huge woman, crippled so that she cannot walk, with a dull, heavy appearance, possibly due to the shut-in life that she leads. To add to the other sinister influences, two boarders of very low character were kept in the family. One of these, evidently feeble-minded, described as wild and uncouth looking in the extreme, was a brother of the boy's maternal grandmother. There were five children in the immediate family, of whom the eldest was placed in a reformatory on account of general incorrigibility. The boy we are considering was arrested at the age of nine on the charge of petty larceny.

The physical examination at the clinic showed the boy to be in fairly good condition, of the usual height and weight for a boy of his age, with an upper chest expansion of two inches, and a lower of two and one-quarter inches. His head, ears and eyes were normal. His tonsils were enlarged, and the septum of his nose deflected to the right.

To the mental tests he gave normal reactions, working the form board correctly, and naming the common colors except orange and black, the names of which he learned at the clinic. His visual memory span was good for three colors. The Binet test showed him to be mentally over ten years old. He was fond of reading fairy tales, spelled third-grade words, but did second-grade arithmetic poorly. He did not seem to be fond of working with tools, and apparently had no way of occupying himself in spare

moments, for his life had been so irregular that he had never learned the customary games of boys.

After this examination, it was recommended that the boy be examined for nose and throat obstructions, and on account of the statement of his teacher and others that he was normally imbecilic, it was thought best to place him in an institution for observation. In the meantime he was kept at the House of Detention. A letter from the superintendent stated that the boy displayed usual mental ability in his school work, that he was of an affectionate disposition but of a rather fiery temper when aroused, and that in the writer's judgment he was morally an average boy, with ability to succeed in class work, provided he could be sent to school regularly.

In April, 1911, he was admitted to a self-governing colony for observation. After some months a report came from the colony averring that R. was the best boy they had ever had, and upon the strength of this record he was adjudged mentally normal, and placed in a family where he now is.

This is a case where the moral delinquency was undoubtedly due to the home training and bad environment. The method of determining the moral status of the boy was simple. It consisted in a physical and mental examination which found no cause of moral imbecility in the boy himself, and in placing him where the effect of good conduct could be accurately observed.

The Family History.—After the delinquent's personal history, an investigation into his family history logically follows. It will be remembered from our study of authorities that many writers attribute moral imbecility to heredity alone, though some, like Tredgold for example, believe that it may develop at an early age and therefore distin-

guish between hereditary and developmental imbecility. Upon such a basis the hereditary disease might be called moral imbecility proper, and that which develops post-natally, moral degeneracy. From our point of view, which regards incorrigibility as the essence of moral imbecility, such a distinction is a secondary consideration. In so far as the concept of hereditary moral imbecility is concerned, its meaning has not been definitely analyzed beyond the signification of an inevitable predestination to badness, which means practically nothing more than that all possible means have been brought to bear to effect the transgressor's reformation, and that all have failed. As far as heredity covers up ignorance or is appealed to as an excuse for ineffective moral training, it is of small help to the diagnostician.

It may, however, compel extra precautions to be taken with some children whose parents' lives give a sinister signification to the children's pranks, which might be otherwise considered mere temporary impulses to mischief. In the following case, heredity alone played the really causal part in the decision to act quickly and thoroughly in the disposal of the matter.

M. R., Case 210, is a fine-looking, manly boy about twelve, coming from a cultured family, with every air of good breeding and quiet gentlemanliness in his appearance. He shows no marked abnormalities and no physical stigmata. He is a little backward in his school work, a matter easily accounted for by frequent changes of schools. His moral delinquencies are of a mild order—the very common one amongst boys of appropriating money at home, and a tendency to choose his companions from a lower social and moral level than would be expected from one of his station. Taken in themselves his aberrations

are not nearly so serious nor so marked as might be found among boys in an average public school. However, both the seriousness and the frequency of his delinquencies were on the increase.

The item which overtops all others in gravity in this case is the heredity. The father contracted tuberculosis, of which both his father and mother had died. He did not succumb to the disease, but he did ^{A Case of Heredity} fall into some dissipation not more unusual than that of many men in his station and with his rearing, but gross enough, and intense enough while it lasted. However, as his immoralities began after the birth of this boy, they cannot be said to have any direct influence through constitutional deterioration and consequent effect upon the germplasm. Besides the father's inheritance of the tubercular diathesis, serious hereditary history is to be found on the mother's side. Her sister died insane. Her father's brother was an imbecile and one of his sisters was the mother of an imbecile girl. On the mother's maternal side was also a taint. Her mother's sister had a daughter who grew up immoral and dissipated.

Under such circumstances, even the mildest symptoms of moral deficiency, and especially since these were increasing in intensity, caused at once the gravest apprehension and called for immediate and most skilled training to avoid a repetition of the same troubles that had occurred with the ancestors.

The first requisite was to see that, as far as possible, the physical condition of the boy, which was excellent, should be kept strictly up to a high standard, for a sound body shuts many gates to moral disease. The best environment possible was the next consideration. A good school with sports, which demand strong, vigorous, manly

self-expression, with out-door associations, plenty of blood-cleansing, fresh air, and every antidote to listlessness, idleness, speculation, or brooding, was sought and found.

A place in a private school in the country, with excellent moral and physical environment and all the activity a boy could crave, was secured for him, and in the last year and a half no trouble has been experienced. On the contrary, R.'s reports have been excellent. Whether or not he will be strong enough to throw off the incubus of such a burdensome heritage which has already shown evidences of its potentialities remains to be seen. So important is it that in spite of every other salutary feature of the case the cautious clinician will suspend judgment until this boy reaches manhood.

Finally, when bad heredity and bad environment coalesce in one individual and to innate worthlessness are added physical defects, and the physical and moral disease of a pauperized home, neglect of training and a neighborhood destitute of any uplifting circumstances, moral delinquency is almost sure to follow. If, further, by the process of elimination, environmental or disciplinary factors are accounted for, as, for example, when the persistent career of moral delinquency continues in spite of a change to the best moral training and the best environment, and clear evidence is present of imbecility, insanity, or moral degeneracy in the parents, we have a solid foundation for concluding that the badness is incorrigible.

In this following description of S. M. we find nearly all the factors present for the generation and nurture of the juvenile delinquent, and the failure of all efforts made to save her must lead us to the conviction that she is a "born criminal."

S. M., Case 6, was a girl eight years old when brought to the clinic in November, 1909, by her mother, who was sent by the Children's Aid Society, where the child had been referred by the principal of the school, on account of her exceedingly bad conduct. The girl had begun school at seven years, but on account of irregularity in attendance and bad home conditions had made practically no progress.

A Case of
Heredity and
Environment

Her physical examination had been begun in school, where the medical examiner found that she had adenoids, and recommended an operation which had been performed three months previous to her visit to the clinic. The physical examination at the clinic revealed no abnormalities or stigmata, and only a slight defect in any of the special senses. Her eyes were later tested and fitted with glasses. In general appearance she was a most pleasing looking child with a frank, open face, large gray eyes, long, glossy, curly hair, full cheeks and a good complexion. She stood erect with her shoulders thrown back, and impressed everyone as being a child of more than ordinarily good temper and disposition. The only noticeable defect was an infantile stammer and a flat voice, probably due to catarrhal conditions. In July, 1909, the speech defect was reported by a specialist as due to nervousness. When the child was careful and spoke slowly, her articulation was almost perfect.

The mental examination showed that she was much retarded. She knew very little of arithmetic, and could add, subtract and multiply only in the simplest numbers. She knew her colors and worked the form board slowly. Her reading in the First Reader was poor, though she was said to be extremely fond of books. The report from school at that time said that she was doing good work in

her grade, which was the lowest in the school. Much of this improvement came after the removal of the adenoids, before which she was reported to be highly nervous and quite deaf, always complaining of ear-ache.

Her life history was quite in line with her mental condition. She weighed six pounds when she was born; the delivery was difficult, necessitating the use of instruments, which left the baby partially asphyxiated for some time. She was artificially fed on barley water and whiskey until she was a year and a half old. She cried a great deal, did not sleep well, and in every way was reported different from the other children in the same family. She did not begin to walk until two years old nor talk until four years. She had measles three times, whooping cough, pneumonia, and was troubled with enuresis at the time of her examination.

The family history added no favorable facts to the situation. There were nine children in the immediate family, five of whom were dead, four of marasmus and one of brain fever. The mother was in poor health before M. was born, but was compelled to work, taking in washing. The mother's father died of tuberculosis, when the mother was only one month old. The father of the girl had always been well up to the time of an attack of rheumatism. He had one sister who was paralyzed. The man was the driver of a wagon; was ignorant and uncouth. The environment of the child was bad in every way. The home was poor and in constant need. Charitable organizations were called in frequently to assist the family with the necessities of life. Several of M.'s brothers and sisters had already attained to an unsavory reputation, especially the oldest girl, who was married. The second daughter, though of better reputation, was quite unwilling to assist

the family in any way. One of the boys had been four years in the House of Refuge, and after leaving there had been unable or unwilling to hold a position and had degenerated into a vagabond. His brother, seventeen years old, was a hard-working, industrious man without much learning or ability, employed as a teamster, earning eight dollars a week, all of which he gave to his parents.

The girl, therefore, entered life handicapped both with a bad family history and with a poor environment. In August, 1909, she was sent to a Convalescent Home for Children in the country, where she remained two weeks and obtained her first experience in a pleasant and healthy home. As a result her conduct was reported to be excellent, and the child seemed to be obedient and happy in every way. In October, 1909, it was necessary to transfer her from the public school which she had been attending. This was the beginning of a series of misfortunes for the child. Her progress in school was not good. She was again brought to the Psychological Clinic in November, 1909, and referred to the eye clinic, where her eyes were fitted with glasses. In the early part of December her mother had a second paralytic stroke, which threw the child largely upon her own resources. Her conduct became so flagrant that a policeman threatened to take her to the station house. She spent her time on the street, stealing rides on ice-wagons, and conducting herself generally in a disorderly manner. Under these circumstances it was thought best to take M. from her home. The clinic secured a temporary boarding-house in the country, where her conduct was soon reported to be unbearable. In January, 1910, she was transferred to the Woman's Hospital for a second operation for adenoids, and for

the enuresis. Here her physical condition immediately improved, but her conduct was so vicious that in April it was found necessary to remove her from that institution.

She was then taken into the home of the social worker who had done so much for her, and had been her constant friend and guardian from May, 1909. In spite of the social worker's influence and the very kindest treatment that could be given the child, her conduct continued unchanged. Her impertinence and disobedience were outrageous; and she was therefore placed in one of the care-taking homes of the clinic, and entered in the first grade in a neighboring public school. For five weeks her conduct was good and progress fair.

About this time an opportunity was found to place her in a children's village near Philadelphia, for observation under the most healthful and satisfactory environment.

During her vacation M. was taken to the sea-shore by her friend the social worker, where her old trouble, ear-ache, again developed, and it was found that both ear-drums were perforated. At the end of her vacation she was returned to the village, but there was no reformation in her character. She was reported quarrelsome, disobedient, impertinent, used improper and vile language to the other children, and had a marked and vicious preference for boys' society. She did not improve in her reading, but liked sewing and manual work, which she did fairly well. Eventually it was found impossible to continue her in the institution and she was finally committed to a reformatory institution for girls.

This is one of the cases in which moral degeneracy is due to a complication of causes,—to a poor heredity,

bad home environment, and vicious neighborhood, augmented by the presence of physical defects and diseases. These influences, in spite of eighteen months of careful attention, the aid of six institutions, five physicians and several friends, and the expenditure of several hundred dollars, proved so strong that no permanent improvement in character or conduct can fairly be expected. Though attractive in personal appearance, and seemingly possessing many potentialities for good, this child was hopelessly lacking in any moral sense and impervious to any elevating ideals. The short sketch given here fails to give more than the faintest idea of the viciousness of her acts, her impertinence, vileness, disobedience, sexual immoralities, and depraved tastes. Heredity and early environment had worked together too long to be overcome.

The Physical Examination and Stigmata of Degeneracy.—Having exhausted the oral lines of examination, we now turn to the subject himself and make a physical examination for the purpose of distinguishing between the removable physical defects and the congenital stigmata. Here the same processes must be followed as have been described with the mental deviate. To that discussion we have little to add, except to mention that with some writers, notably Lombroso and his school, the physical characteristics of the born criminal have been magnified to a place of importance in the classification of anthropological types hardly justified in common sense by the results. In his work on *The Criminal*, Havelock Ellis devotes a chapter to their physical characteristics, treating the anomalies of the skull, face, hair, physiognomy, trunk and viscera, but admits that not only is the science of anthropology so inexact that it affords little precise data on this subject, but that the descriptions of criminals

given by experts—or even of the same criminal by the same expert on two occasions—differ so radically that they are worthless for yielding any true impression of the criminal described. He also greatly circumscribes the value claimed for physiognomical studies by the earlier Italian criminologists, saying:—"There is, in the opinion of many of the Italian anthropologists, a special physiognomy for different crimes, though this statement is qualified by the well-known fact that quite different crimes may be committed by the same person. Dr. Marro, in his *Caratteri dei Delinquenti*, describes no fewer than eleven different classes of criminals, though the distinctions are not all physiognomical. Professor Lombroso's descriptions are, however, the most vigorous and picturesque, though it is scarcely possible to receive them without qualification. Thieves he describes as frequently remarkable for the mobility of their features and of their hands; the eyes are small and very restless, the eyebrows thick and close, the nose often crooked or incurved, the beard thin, the forehead nearly always narrow and receding, the complexion pale and yellowish, and incapable of blushing. In those guilty of sexual offences Lombroso finds the eyes nearly always bright; the voice either rough or cracked; the face generally delicate, except in the development of the jaws, and the lips, and the eyelids swollen; occasionally they are humped-backed or otherwise deformed. Sometimes in incendiaries Lombroso has noted a peculiar delicacy of the skin, an infantile aspect, and abundance of hair, occasionally resembling a woman's. The eye of the habitual homicide is glassy, cold and fixed; his nose is often aquiline, beaked, reminding one of a bird of prey, always voluminous; the jaws are strong; the ears are long; the cheek-bones

Marks
of Born
Criminals



High-grade moron. Negroid type of profile.



A Cretin girl. Typical position of the tongue.



A case of extreme moral delinquency. Age 10 years.



Middle-grade moron-Mongoloid.

large; the hair dark, curling, abundant; the beard often thin; the canine teeth much developed; the lips thin; nystagmus frequent; also spasmodic contractions on one side of the face, by which the canine teeth are exposed. The forger and sharper, on the other hand, has frequently a singular air of *bonhomie*, a kind of clerical appearance which is indeed necessary in his business, because it inspires confidence. Some have angelic faces; others are small, pale and haggard. The prisoner also frequently has a peculiarly benevolent aspect. 'In general,' Lombroso concludes, 'born criminals have projecting ears, thick hair, a thin beard, projecting frontal eminences, enormous jaws, a square and projecting chin, large cheek-bones and frequent gesticulation. It is, in short, a type resembling the Mongolian, or sometimes the Negroid.'

The Psycho-Physical Tests.—Finally we have come to the mental tests proper. Here it must be kept in mind that we are seeking to establish the presence or the absence of certain instincts and of certain rational powers. Already the oral examination has revealed much information regarding both these points. The conduct of the child, the nature of his acts, his reaction to punishment, his expressions of sensibility to pain, his irrational persistence in useless crime in the face of severe punishment—all go to show whether his instincts are normal and his interests healthy.

The information thus given can be substantiated by certain tests for sensitivity. The algometer and aesthesiometer will reveal any abnormalities in such fundamental capacities as pain and pleasure sensitivity. The same tests can be more simply made by pricking the child's hand with a pin or by pinching it severely. We have had children who would hardly flinch under the severest tests

of this kind. Cases have also been recorded where the children have sucked the flesh from off their fingers without apparently feeling any pain. The instance already referred to in this chapter was one of such a low type of insensate creature. The same insensibility has been remarked by other observers. Havelock Ellis writes:

"The physical insensibility of the criminal has indeed been observed by every one who is familiar with prisons. In this respect the instinctive criminal resembles the idiot to whom, as Galton remarks, pain is a welcome surprise." He may even be compared with many lower races, such as those Maoris who did not hesitate to chop off a toe or two, in order to be able to wear European boots. Dr. Felkin found the maximum distance at which two points of a compass could be distinguished at the tip of the tongue was in an average European 1.1 mm., in a Soudanese 2 mm., in a negro 3 mm.

"Lauvergne mentions a convict imprisoned for life, who smiled with pleasure when, moxas having been applied to him, he saw his skin burning and heard it crack. Insensibility of Criminals Sbro (who killed his brother and his father), Lombroso's favorite typical case of 'moral insanity,' was found by Tamburini and Sepilli to be without perception of pain when tested with a needle. Other criminals have been found very deficient in sensibility to the electric current. . . . Dr. Penta, in the course of his elaborate researches, found that the majority of his 184 instinctive criminals at Santo Stefano were insensible to the pain of punctures, burns, cuts, and even grave surgical operations. 'I have extirpated tumors,' he remarks, 'of considerable size, in the back and neck, without the necessity of producing anæsthesia and without causing pain; in a case of feigned epilepsy ammonia to the

nose caused no reflex phenomenon and deep puncture and burning of the skin produced no painful contraction.'"
. . . "Working with Du-Bois Reymond's electrical apparatus, in conjunction with Marro, he found the sensibility of the criminals much inferior to that of the normal person examined. Swindlers possessed greater sensibility than murderers or thieves. Marro found sensibility, measured by an *æsthesiometer*, most obtuse in murderers and incendiaries. Similar results were obtained by Ramlot in reference to tactile sensibility; he examined 103 criminals and 27 normal persons and found obtusity in 44 per cent. of the former and in only 29 per cent. of the latter. It should be noted that cases of excessive sensibility, due either to extreme pusillanimity, or to some morbid condition of the skin or brain, are also found among criminals."

Mental Tests.—The tests for reasoning powers, like other mental tests, are involved in a great many difficulties. Such simple tests as problems in arithmetic, the solution of some problem requiring practical wisdom, or the performance of some simple task involving the choice of a means to an end, obedience to commands, the working of a puzzle, or similar experiments, show a child's rationality with fair accuracy, and will surely reveal any serious aberrations in this crowning faculty of the human mind.

The Sub-classification of the Incurrible Moral Deviate.—After the main question of the corrigibility or the incurribility of moral delinquency has been settled, the sub-classification of the subject remains to be completed. Different authors give different sub-classifications. Thus, Dr. Barr, following Dr. Kerlin, correlates the moral imbeciles with his sub-classes of mental imbeciles. According to this arrangement, measured by their mental capac-

ity, moral imbeciles are low-grade, middle-grade and high-grade, with the following moral characteristics respectively. The low-grade moral imbecile is bestial and cruel, having delight in open criminal acts, carried out with an animal stubbornness and stupidity. The middle-grade moral imbecile finds his delight chiefly in mischief which expresses his entire lack of any altruistic impulses. He has no regard for the rights of others and performs his mischief chiefly for the excitement of accomplishment and the satisfaction of his egotistic desires. The high-grade moral imbecile exhibits far more refinement of evil, coupled with a mentality which enables the evil-doer to carry out his plans with long and exceedingly cunning preparation. He exhibits no moral sense and does not seem to have reason enough to understand that his actions will ultimately deprive him of the privileges which he covets. Oftentimes this disposition is associated with an entire absence of stigmata with great physical beauty and with a peculiar innocence or saintliness of expression, which immediately strikes the spectator unacquainted with the real situation, and enlists his sympathy for the degenerate.

In all these cases a knowledge of right and wrong may exist. Sometimes this is limited to concrete cases or actions without the corresponding knowledge of right and wrong in the abstract. Thus, lying may in general not be thought to be wrong, though any particular lie is admitted to be wrong. On the other hand, the opposite may be true, and the moral imbecile may admit right and wrong in the abstract with perfect freedom, while he may seem to possess no comprehension of a wrong deed.

IX.

SOCIOLOGICAL RELATIONS OF THE CLINIC

THE sociological importance of the Psychological Clinic has been hinted at more than once. Its relations to the past have been outlined in the historical sketch in the first chapter. There the clinic was set forth as the latest social expression of a long scientific development. But it is something more than a scientific organization devoted to an abstract purpose and cloistered within the confines of scholastic interests. It is also a social enterprise, not a small, self-contained, and unrelated social agency, originating and working within its own peculiar field without regard to society at large, but it is an organization, both scientific and practical, devoting itself to a field not occupied by any other social structure. This aspect of the clinic has been sufficiently dwelt upon in preceding chapters. In them the reader must have frequently caught sight of the background of social institutions, homes, schools, societies, reformatories, clinics, and hospitals,—without which the varied tasks of the Psychological Clinic could never be performed. From this point of view the clinic is merely one specialized organ in the economy of society as a whole and is dependent for existence and function upon many other coördinate social organizations. In dealing with this aspect of the clinic we will endeavor to summarize the multifarious relationships of the organization under simple and more or less figurative captions.

Whence the Clinic Children Come and Whither They Go.—If, through his dramatic sense, the imagination of the reader has been caught with the human side of the

clinic, he will vaguely have seen in his mind's eye a procession of children coming from unknown sources, pausing for an examination, then passing on to other unknown points of distribution. If his imagination has been kindled to the point of framing an inquiry it may have taken the form of two questions, "Whence come these children?" and "Whither do they go?" These questions, whether formulated by the reader or not, succinctly analyze the sociological relations of the clinic into two classes; for as a social organism the clinic is concerned almost wholly with the receiving, sorting and disposing of children. In receiving it makes no distinction whatever. It makes no requirement in regard to sex, color, age, character, social position or previous condition, but freely receives all alike. It examines them individually and distributes them again to their properly appointed places according to mental and moral worth. In this capacity, as we have already said, the Psychological Clinic stands preëminent as a clearing house for children. When they first come it is true that some classification has already been made, for they come because they are mental or moral deviates. By its examination the clinic further classifies them and assigns them according to their needs. In this process many different professions and many institutions are directly or indirectly involved.

First, the gathering, filing, and correlating of data secured from these examinations immediately relate the Psychological Clinic to the scientific side of psychology in general and particularly to that branch called abnormal psychology,—a relationship further strengthened by the training of clinic examiners, teachers for backward children and social workers.

Secondly, the child who is the primary factor in the

situation relates the clinic directly to a multitude of social institutions, all of which would be enumerated in answering fully the two questions propounded above: "Whence come the children?" and "Whither do they go?" To the first question we will now turn, and by examples of actual cases give some idea of the wide range of institutions with which the clinic comes into immediate contact on its receiving side.

Beginning in a large and general way, the children may be said to come not only from widely separated localities, but from many strata of society. The residential districts, as well as the slums, contribute their quota of cases. The shabby, pallid, wizened offspring of the poorest couple may be followed by the clean, neat, well-clad child of parents in good circumstances. For imbecility is not nearly so much a matter of environment as are the contagious or infectious diseases. It illustrates powerfully and peculiarly the "ills which flesh is heir to." Heredity, more than any other group of factors, plays the dominant part in its perpetuation. Its law is no respecter of persons. It holds among the rich and cultured and the poor and ignorant alike. At one period of European history, so it is said, every wearer of the purple was feeble-minded. Certainly Nero, Commodus and Elagabalus were imbeciles or idiots. Epilepsy, so often associated with mental deficiency, and resembling it in its tendency to inheritance, claimed some of the most noted men of the world, among them Napoleon, Rousseau, Mohammed, St. Paul and Cæsar. Inheritance may indeed be modified by proper treatment, training and surroundings, but the life of over-stimulation led by the middle and upper social classes in modern America favors the continuation of feeble-mindedness almost as much as do the privations of the lower classes.

From the Upper Classes.—An illustration of those coming from the better classes is Case 40, a young girl of twelve years who did not take her first step until she was eighteen months of age, and did not talk until she was three years of age. She started to school when three years old and continued until she was twelve, during which time she made no progress. She was able to add two and two, but said three times four equals six, and six plus two equals four. Her spelling was on a par with her arithmetic. She could spell cat and dog, but spelled mouse, m-o-s-e. At home she played with children much younger than herself, and could not comb her own hair. She ate at the table with the rest of the family. Her disposition was ordinarily good, but sometimes she grew causelessly irritable. Her two talents, not unusual with those of her class, were an ability to sing and a good memory for disconnected facts.

In general appearance she was tall and very thin, with a well-shaped cranium, good features and well-formed ears. The bridge of her nose was thick; her upper lip was short; and her palate narrow and V-shaped. Her skin was somewhat rough and she suffered from *pediculosis capitis* to such an extent that her scalp in places had been scratched raw with her finger nails in a vain endeavor to find some relief from the pests.

Surprising as it may seem, this child came from a good family. The mother was elegantly and fashionably dressed and presented every mark of good social position and some culture. The father was a business man in an eastern city. Yet the child was feeble-minded and not above the rank of the middle-grade imbecile.

Though she is not an isolated case by any means, it must be said that the clinic does not receive the majority

of its cases from her class. This is readily explained, not by the infrequency of feeble-mindedness among the upper classes, but by their financial ability to pay for private examinations and private instruction of their mentally defective children, and also, as remarked by Dr. Tredgold and Dr. Witmer, to the sheltered position of many rich men's sons and daughters, who, by reason of their power to hire things done, naturally frame for themselves an environment so simple that it never overtaxes, and hence never reveals their congenitally limited capacities.

From the Lower Classes.—The other social extreme is well represented in our files. A striking illustration is a girl from a family of seven children, or rather the remainder of the seven, who live in conditions of squalor and disease hardly conceivable to people of easy circumstances.

Case 89 was the daughter of a ragpicker, the flower of a flock of seven children of whom two had died, one as a result of accident, and one from pneumonia. Of the remaining five children, the oldest boy was a low-grade imbecile, through whom the clinic came in touch with the family. The second boy was a frail-looking child, backward in his school work. The social worker who visited the home and the school found this boy one of a large group of desperately poor foreigners, who were being taught in a public school-room entirely without ventilation. At home one of the younger children was apparently in very poor physical condition, and was said to be afflicted with tuberculosis. A baby had been for some time in the hospital, where he was treated with thyroid extract for cretinism. In addition to insufficient nutrition and lack of care, both the result of poverty in its most vicious and degraded form, some marked cause of degeneracy in the

family, possibly syphilis, had cast its perpetual blight over at least two of the children, one of them the girl here described.

She first came with her elder brother, in 1910, to the Psychological Clinic, accompanying him and the mother because no one was at home with whom she could be left. In spite of the fact that the child, poorly clad and unprotected from the weather, had come some distance in the rain she presented an exceedingly attractive appearance, with her Latin type of beauty, her small stature and lovable face, made more striking by their setting of squalor. Mentally she appeared to be normal except for a retardation easily explained by home conditions and physical defects. Her teeth were in a wretched state; she suffered from *pediculosis*; a bad cough suggested tuberculosis, and the naso-pharynx was obstructed with adenoids and enlarged tonsils. Although she was mentally normal, her physical condition was such that the clinic took her in charge to administer the care and training required to save her from future mental and moral deterioration.

During a period of two months she was taken for regular treatment to the Dental Clinic of the University of Pennsylvania, and also placed under the direction of a specialist for anti-syphilitic treatment. So far, however, had the physical deterioration progressed that at seven years of age it was already too late to free her entirely from the degenerating effects of her environment; and yet, if this little girl could have been kept for six months or a year in a favorable environment, and subjected to satisfactory educational influences, it might have been possible to arrest the progress of physical degeneracy and to overcome moral and mental retardation.

Many other cases might be chosen to illustrate the

service performed by the clinic for needy members of society, but space will not permit the citation of more than one other, valuable as a specific instance of private philanthropy finding expression through the ready opportunity offered by the clinic.

Another example of destitution, almost equal to the case cited above, was exhibited by Case 58, brought to the clinic October 9, 1909, by a public school teacher who was interrupted daily in her work ^{A Slum Boy} by a noise from the street corner like that of a miniature boiler shop. Upon investigation it turned out to be one small, lone urchin assiduously drumming—to him—sweet music from a trolley pole. Further investigation proved this to be his chief, if not only, recreation. At his home—two poor rooms in a tenement—eight other children (left from a flock of thirteen) demanded all the scant space available and all the care the busy mother could give. J. had to find an outlet for his energies upon the street and manufacture amusement out of trolley poles.

Though he was eight years old, his apparently hopeless stupidity, reported as “idiocy” and “gross mental deficiency,” combined with disorderliness and intractability, had precluded his admission to the public school and caused him to be rejected by the neighboring parochial school. His education, as well as his recreation, had been obtained on the street.

The teacher, touched by the forlorn child and the destitution of his home, undertook to do something for him. His mental state suggested the Psychological Clinic at the University of Pennsylvania, and with the parents' consent he was brought for a careful physical and mental examination. He was undersized and underweight, stooping forward like an old man, and moving slowly and feebly.

Some of his teeth were lacking, others were decayed, and he was very deaf. His nose discharged continually, and his open mouth and nasal deformity indicated adenoids. Tickling the boy brought only a whimper. While at the clinic he did not smile once, and spoke but one word, and that was, "candy." He could not wash nor dress himself; did not know colors, nor the names of many common objects; spoke only in monosyllables, and of course could neither read nor write. He showed no affection, received candy and peanuts without a word or a look of thanks; held on to them and to his cap as though he expected some one to snatch them away, and continually exhibited a covert animal watchfulness for the moment when he might escape.

On the same day he was taken to the Nose and Throat Dispensary of the University of Pennsylvania, where adenoids were diagnosed. Three days later, the boy was operated upon at the University Hospital and a large adenoid removed. When he appeared at the Psychological Clinic on the fourth day following the operation, he was brought in by the teacher, assisted by our social worker, only after strenuous coaxing. To his natural timidity, almost that of a young savage, had been added the fear of the clinic, bred of his experience in the necessary examination of his nose and throat. But his improvement was instantly remarked. He breathed better and the nasal discharge had ceased. It could now be determined that he was able to hear in one ear, and, most encouraging of all, he spoke a few words. A week later he even smiled. He also played with the toys, called many of them by name, learned to string beads, and after repeated instruction was finally able to select and string yellow ones. He was comparatively responsive, inquisitive, and showed an

unusual energy for doing things. He reacted to some of our tests as does a feeble-minded child.

At the end of another week he showed increased improvement. The social worker, who visited his home to assist the family with instruction and a gift of some clothing, reported that he had astonished his mother one day this week by using for the first time in his life two or three words together. This first sentence was, "Mom, my shoe hurts me." He had ceased the screaming in the street as well as the hammering on trolley poles which annoyed the neighbors so much, and had become more tractable in the house. The "viciousness" of which the mother had complained, such as pulling his brothers' hair, spitting in their faces, lighting matches and setting fire to paper in the house, had not shown itself since the operation. He was playing or working, whichever we choose to call it, in a more sensible and intelligent manner. He had a craze to use hammer and nails and succeeded one morning in driving nails into the front door so that it was impossible to get it open. The social worker suggested to the mother to give the boy a block of wood and some nails, and let him amuse himself.

When provided in this way with occupation he was good for hours. However, there was no school nor kindergarten of any kind in the neighborhood where he could be entered; so the boy was finally placed by a charitable organization in an institution for feeble-minded children, where he is at the present time.

Cases from the Home.—Passing now from the general sources represented by the social grades from which children come, we proceed to those more specific sources represented by the multitude of institutions in which children are found. It must be remembered that the

clinic in its capacity of receiving and dealing with all classes of special children, supernormal or subnormal, extends its helpful services just as far as the world of needy childhood extends. First and chief among these realms is the home; and from the home, therefore, most of the cases come. Often the advice of the school-teacher, a newspaper notice, or the word of a good neighbor, is the immediate occasion of informing and moving the parent to bring the child. The cause is either a long series of transgressions slowly but continually growing worse as effort after effort on the part of the parent fails to reform the bad boy or girl; or again it may be a gradual falling behind in the grades at school; until finally the clinic is called upon to locate the cause, and if possible to remove it.

Case 151 was a girl four and one-half years of age, who was brought to the clinic by her mother in February, 1910, because she did not talk.

When she was one year old she had *grippe* very badly and nearly died. When two years old, just as she had begun to say a few words, she contracted and developed a severe case of measles. When she recovered she retained the few words she had already acquired, but did not learn any more. In other respects she was only slightly retarded. The first tooth came at about eight months, and when two years old she began to walk.

The conditions of birth were normal. In the family history the only factor of importance developed was the statement that the father was tongue-tied when a child.

The physical examination revealed no important congenital anomalies. The left eye is a little higher than the right. At the time of the examination the family physician stated that she appeared to be in good physical condition,

except that her left tonsil was much swollen and her adenoids were probably hypertrophied. Her nose was undeveloped at the base; the nostrils were small; the upper lip overhung the lower. Two adenoid growths had been previously removed.

The mental examination revealed no other defects than those concomitant with her speech retardation. Her mother reported her an obedient and affectionate child, now becoming sensitive over her inability to talk, seeking quietness and liking to be by herself. The girl could give the soft sound of "t" and "p"; the hard sound of "b" and "d", and the "th" and "f" sounds, but said "cha" for "k," "m" for "y;" gave a sort of a "dh" sound for "g," "pee" for "bee," "tee" for "dee" "sh" for "s," "fee" for "o," "ou" for "r." She could utter "at" quite distinctly, said "mama" and "papa" and tried to say "thank you" and "please."

On March 9, 1910, she was entered in the speech class at the clinic and was progressing rapidly when the term ended on May 23, 1910. She was to return in the fall, but when again brought to the clinic by her mother she was found to be so well started in correct speech habits and had made such progress that it was not thought necessary to give her any further training here, for it appeared certain that she would acquire language in the normal way.

Case 83 was a boy eight years old who had been reared in England, where his grandfather and uncles, men of good family and comfortable circumstances, made him the pet and idol of the home. There, in a small town, he spent his early years and went to school, passing his holidays with his grandfather or uncles on the river.

In the meantime, on account of business, his father found it necessary to spend a great deal of his time in

America, so that father and son were practically unacquainted. Finally, it was decided it would be best for the boy and his mother to join the father in this country.

A Trans-
planted
Case

As a result the boy was suddenly removed from the environment to which he was accustomed and thrown into totally new surroundings. He was sent to the regular public school and put in the first grade. The work was of course quite different from that of the English school and he was not promoted to the second grade at the end of the term. His conduct, however, in the school-room was very good and the teacher had no fault to find with him in that direction. Out of school hours he spent most of his time with his mother at home until a second child was born in the family. Just before and after the birth of this child the boy was thrown on his own resources and not unnaturally drifted into bad companionship. This was due to the fact that he was in a strange land and was unskilled in the games of the American youths. Not readily acceptable to boys of his own class, he found refuge in a crowd of "older fellows," who made him their tool. In order to maintain his place with them, and probably, too, on account of their threats, he began taking money from home. On one occasion he took fifteen dollars, and on another thirty-five. At other times his pilfering was limited to small sums, with which he bought candy for the older boys. As might be expected, when questioned about the money he lied. For fear of punishment at home, he often stayed out late at night. He also played truant as often as four times in one week.

To account for these tendencies toward evil no causes could be found in the family history. The boy's birth had been an instrumental delivery; his health had been fairly good up until four months previous to the examination,

when he was attacked by a "kind of spell" and became unconscious. Later he was overtaken by a similar spell, which a physician diagnosed as convulsions, probably due to indigestion.

In appearance, though small, this boy was well formed; and, excepting that he had adenoids, was without physical defect. He was bright, pleasant faced, very well mannered, quiet spoken, and altogether presented the appearance of a most charming and lovable boy.

After the removal of the adenoids, it was reported by his mother that there was a marked change in her son and that he was "just as good as he had been before any trouble arose." Very probably, however, the chief cause of the boy's bad conduct lay in his environment. His natural craving for the company of boys led him to take any means to attain it. Money was to him as nothing. The fact that he took large sums was due altogether to the fact that these sums lay in his way. He may have had a vague notion that it was wrong, but how wrong was altogether beyond his comprehension. His truancy and staying out at night were probably due to the punishments he received for his first misdemeanors. The removal of the adenoids eliminated one source of irritation, but added to this was the clearer understanding of the child, acquired by the parents through the advice and information given by the clinic, coupled with their desire to do the very best for their boy. Their attitude toward him was changed and as a consequence his conduct was altered. Unnatural as it may sound, he and his father became acquainted and the boy, first so petted by his relatives across the sea, then bereft of all suitable companionship and left to find what entertainment he might in the streets, began now to receive from his parents the attention he naturally

craved. Outdoors upon the streets and in school he gradually became adapted to the ways of American boys and eventually found new and wholesome modes of expression for his juvenile desires.

Case 94 is a boy eleven years of age who was brought to the clinic in November, 1909, by his mother, on account of retardation. He had been at school five years and his chief pedagogical trouble seemed to be extreme backwardness in reading. He tried to study at home, but efforts and results were alike unsatisfactory.

C.'s family consisted of father, mother and four children, three others having died in infancy of diphtheria. The eldest boy was twenty-one years old, and of nervous temperament. C.'s birth was natural, his mother, a Scotch woman, being well and robust. The father appeared physically well, but had been inclined to melancholia since he had lost his three children. Several members of his family had gone insane. C. walked and talked at the usual age and suffered no serious illness except moderate attacks of measles and whooping-cough. He had, however, a hernia in his left groin, to which a truss had been recently fitted. The physical examination showed also a decided curvature of the spine; long head, narrowing to the front; forehead of medium height; nose broad at the bridge, nostrils small, septum deflected to the left; mouth open much of the time; upper lip short, lower lip corrugated and hanging down; teeth black and ill-cared for, with tartar pushing back the gums; heart action decidedly irritable, lungs normal; cervical and post-cervical glands decidedly large. The boy was round shouldered, with infantile protuberance of the abdomen.

The mental examination showed that he was obedient, affectionate, generous, and thoughtful; loved pets; had no

bad habits; active when not in school, as he delivered bread for a baker in the neighborhood of his home. He liked tools and had tried his hand at carpentry. He did fairly well in arithmetic; his reading was wholly unsatisfactory, though he endeavored to tell the story of what he had read with some intelligence. He also knew colors well.

He was operated on for the removal of adenoids and tonsils. He was also sent to the Eye Clinic, where he received treatment and was fitted with glasses. The operation for adenoids and tonsils and the relief which the glasses brought marked a decided improvement in the boy's condition. He was then taken to the Dental Clinic, where he had his teeth properly adjusted.

C. then returned to school and his teacher reported progress to the extent that she expected to promote him in June.

On July 5, 1910, he entered the summer school. Here he was back in his work, in fact far below the other boys of his age. He made his greatest improvement in arithmetic and reading. In the class he did fairly well in history, but he said that he could not answer any of the questions given him in the test. He did a great deal of talking at first with the boys near him, but gradually calmed down and became one of the best boys in the school. Occasionally he showed his temper, but a few words of caution about boys who lose their tempers set him to rights. He was active in the swimming pool and gymnasium, making great progress in the latter and developing into one of the quickest boys on the floor.

On October 13, 1910, his mother reported that he was doing exceedingly well at school; that he had enjoyed the summer school and talked a great deal about it. She

thinks he has greatly improved since going there. On November 1, 1910, it was reported that he had been promoted into the third grade, and on February 13, 1911, his mother sent word that he had been advanced to the succeeding grade.

Next to those brought from home, by far the largest number of children come from the public and parochial schools. Very frequently it happens that a public school teacher observes a pupil who is dull below the average. She may even suspect a case of imbecility, but discretion prevents her from stating her suspicion to the naturally opinionated parents. She therefore refers them to the clinic with the statement, "John is backward in his studies and had better be examined at the University." By such a course, the teacher avoids all possible controversy and puts the case into the hands of experts in whom the parents have abundant confidence. As a result, the teacher is relieved from irritating and hopeless efforts to teach a pupil in the presence of unnecessary obstacles; the parents are given a better notion of their responsibilities; the child is freed from useless nagging and punishment, and given positive aid; and finally a greater spirit of coöperation is cultivated between the school and the home.

Case 81 was a boy nine years of age who was referred to the clinic on November 10, 1909, by the principal of a public school because of general backwardness. When five years old he started kindergarten work and afterwards went to public school, where he made no progress. He was promoted from the first grade into the second grade A without his letters. The case was greatly complicated by bad conduct on the boy's part and by the alcoholic intemperance of both his father and mother. The cause of his trouble was a fall which he had

Incurable
Retardation

when about four and one-half years of age and which left a scar and lump in the middle of his forehead. About two weeks later he fell again from the same steps, this time striking upon the back of his head with such force that he had to be taken to the Children's Hospital, and for two or three months after he was unable to use his limbs. His left side was more affected than the right and when he finally began to walk again he dragged his left foot. Since the fall he had suffered from severe headaches, was extremely nervous, and for this affection had been taken to a hospital.

He was somewhat under normal stature for his age and not well nourished. Both eyes were somewhat underdeveloped and his right eye was a little larger than the left. His left shoulder was lower than the right and he was stooped forward.

The mental examination revealed a low degree of mentality. He could distinguish colors, but he did not know how to read the simplest words nor even to call the letters. His father had undertaken to teach him his letters, but, though he would apparently learn them in the evening, he would invariably forget them by the next morning. His counting was equally primitive. He knew that a nickel was equal to five pennies, but failed on other coins.

Two weeks after the examination he underwent an operation for adenoids. Two months later the principal put him back into the first grade, for although he had improved somewhat, he was not at all fit to be in the second grade.

A month later she reported that he had been greatly improved physically by the treatment, but was not progressing in his school work as he should. A little later

the boy stole twenty dollars from a coal office, but his arrest was deferred and the case eventually dropped when he returned all but forty-three cents which he had spent for boyish trifles. In the meantime the boy's home suffered many vicissitudes due to his mother's alcoholic intemperance, her frequent absences from home and one attempt at taking her own life by poison. As a result of such conditions, no help could be looked for from that direction and after he had remained in one grade in the public school for five years, his parents were persuaded to consent to do what should have been done at first, namely, to place the boy in an institution for feeble-minded children. It was due to the acquaintance of a school principal with the clinic that the right course was finally advised.

Case 93 is a girl nine years of age who was brought to the clinic in March, 1907, by a school nurse, the child having been three years in the first grade without making any progress. She could read a few figures, but was unable to make them. At two years' of age, when commencing to walk, she fell into the cellar and immediately afterwards began having fits. She was taken to the Orthopedic Hospital, where they recommended the removal of her tonsils. At first these fits came on about every three months, either day or night, but in the last two years she had not had bad attacks.

The physical examination confirmed the diagnosis made at the Orthopedic Hospital of enlarged tonsils and adenoids. On April 13, 1907, the child was operated on by Dr. Packard, who took out the tonsils and scraped the naso-pharyngeal vault. After the operation the nurse reported that the child was much improved, and the mother said that during the week after the operation she noticed for the first time that the child took an

interest in herself and worked about the house. She looked much brighter, and talked more freely, and there was nothing in her manner to suggest mental deficiency.

However, on November 22, 1909, she was again brought to the clinic by her mother, who stated that she would not go to school regularly. Sometimes she appeared at school an hour late, again she would become so absorbed in the store windows that she forgot entirely where she was going. After examining the case and reading over the past history, it was decided that the diagnosis of epilepsy could be made with a fair degree of certainty.

On November 29, 1909, she was again brought to the clinic by the probation officer, who stated that she had visited the home and found it in a wretched condition, frightfully dirty and without water. December 6, 1909, L. was again brought to the clinic by the probation officer, who reported that water had been put in the house and that L. showed the good effects of this. Finally, on January 6, 1911, she was sent to the Colony Farm and Epileptic Home at Oakburne, Pa., and on February 1, 1911, it was reported that she was doing well in that institution.

Many children are sent from charitable organizations. To these societies the clinic is proving itself an invaluable aid. As social workers recognize more and more that delinquent children are not all bad through their own volition nor all of them bad through external environment, but some of them through incurable affections demanding most skilful tests to discover, they turn readily to the clinic for aid in deciding the disposal of such charges. By having defects discovered and the remedy applied before any attempt is made to locate the charge permanently, many children are saved from useless and pernicious

cious transfers from institution to institution, and family to family, and the charitable organization is not only relieved from much worry and useless work but is permitted to extend its efforts to many other needy objects. This course frequently entails medical and surgical relief, followed by a course of constitutional treatment or moral training in some appropriate home or institution. As an example of what can be done in this field, the following case is offered.

Case 152 was a boy thirteen years of age brought to the clinic, February, 1910, by a probation officer, for backwardness in school, stealing and begging. He was not a court boy, but the probation officer having his brother in charge became interested in him. She stated that he had been arrested two times for begging on the streets, where he pleaded for money to bury an imaginary sister.

He commenced kindergarten work when four and one-half years old and entered public school a year and a half later, where he remained three years in one grade. He then went to a parochial school, staying there nearly five years, and again entered the public school. He could not do the work of the fourth grade and was placed in the third grade B.

When about two years old he had eczema, from which he continued to suffer until he was seven years old. During that time he had an abscess on his neck which lasted a year, and which was followed by many abscesses and boils. He had the measles, whooping-cough, chicken-pox and bronchitis, from which he lost his voice for a time. He began to walk when about seventeen months old, and his talking and teething were slower than the other children in the family.

One of his brothers, twenty years of age, had been in the House of Refuge and the Rahway Reformatory, and was away from home. Another brother, aged fifteen years, was on probation, facing the probability of also entering the House of Refuge. M. himself had been in an Industrial School, and when ten years old had run away and remained away from home for three years under an assumed name.

In general manner he was apathetic with a rather expressionless face. In walking his entire right side drooped; a prominent protuberance appeared in the occipital region of his skull and a slight prominence in the left frontal region; his hearing was very slightly impaired in the right ear; his tonsils were enlarged and indications of adenoids visible.

The mental examination showed that he could do simple addition and subtraction of fractions correctly, but failed in multiplication. He could read from the fifth reader fairly well; he also read from the sixth reader, although he did not understand the meaning of many words and pronounced many incorrectly. The boy admitted that he was in the habit of stealing, but that he stole nothing but pencils, which he often gave away. The probation officer said it was very likely that he did give them away, as he was a generous, good-natured boy. However, according to her statement, the boy took other things besides pencils. The Mother Superior of the parochial school which he attended stated that he was disobedient, but a great coward. She was always able to get the truth from him by telling him that if he did not tell the truth she would turn him over to an officer.

He was sent to the eye and ear clinics and also operated upon for the removal of adenoids. On July 5, 1910, he entered the summer school with every great promise (if

his own word was to be taken for it) of working a real self-reformation. But his slinking movements and his sneaking manner soon attracted the attention of the other boys in the class. They did not take kindly to him and soon dubbed him "the crook." On several occasions he took money from desks, and when the other boys heard of this, though they were in no wise angels themselves, they shunned him more than ever. Against this he rebelled and played truant one afternoon, but came back the next day pleading for mercy. At times he did very well in his studies, but for the most part his work was unsatisfactory.

In the fall of that year his mother reported that he had entered a parochial school and was doing well; but he had acquired the fever for work and wanted to leave school as soon as he was fourteen years old.

During Christmas week of 1910 he worked at a department store and did well. During the latter part of January, 1911, he secured a position in a drug store where he received three dollars per week for running errands. At last account he was continuing faithful in his duties and had shown no signs of dishonesty, though surrounded with temptations.

The most notable case and one attracting wide attention was I. J., Case 45, brought by the Visiting Nurse Society on account of general retardation. When first
Irene brought to the clinic in the summer of 1909 she was five years and two months old, though her height and weight were those of a child of three years. She was not able to speak a word, but would prattle like a baby of twelve months. She was taking her first steps from one piece of furniture to another. She walked with her feet far apart and hands extended, ready to grasp the next support. She smiled occasionally, but usually kept her

mouth tightly closed, grinding her teeth all the time. When pleased she would utter queer little grunting and squealing noises. She smiled normally when tickled, but did not laugh. When first given a doll some time before, she tore its clothes off and whirled it around by the toes. She was just beginning to play with clothespins and other toys.

Her special senses were apparently normal. She listened to the ticking of the watch, but attempted like a baby to put it into her mouth and clutch at the hands, showing great surprise because she could not reach them through the crystal. She would play with colored blocks by throwing them down on the table and scattering them about.

Her general appearance was most pleasing. She was a mulatto with pale olive skin, black eyes, long lashes, and delicate, well-formed nose and mouth.

Her countenance wore an expression of infantile gravity and suppressed humor which made her an altogether charming little child. She was reported as being generally good tempered, but when angry would fight, scratch, and bite. She ate only liquid food and would cry if something solid found its way into her mouth. There were no stigmata present.

The mental examination gave her the intellectual status of a child about one year old; indeed, one test indicated that the infantile instinct of grasping when the palms were touched was still present. When the examiner placed his forefinger in the palms of her hands her fingers involuntarily closed over them and she had not sufficient coördination to release his fingers when her arms were drawn above her head, though she desired at the same time to play with some blocks before her. Her disapprobation of this involuntary captivity was expressed by her usual squeaky, grunting sounds.

Her subsequent two years' history is interesting. As her backwardness appeared to be due to malnutrition, she was sent for six weeks to a seashore sanitarium, conducted under the auspices of a daily newspaper. In the short time of a month and a half marvels were wrought in her development and physical appearance. She gained flesh rapidly and took on the appearance of a plump, well-fed child. She learned to walk fairly well and to talk by using short sentences.

Later she was placed in the training school at Vineland, N. J., for a long period of medical treatment and observation under special training to determine her exact mental status, and her future proper place in society.

The social ramifications of the work are indicated as much by the disposal of the children as by the sources from which they are received. In general, the cases may be classified roughly according to their disposal into three groups. Some are cured immediately by medical or surgical means and need no further special training in order to regain their normal places in society or at school. Another group includes those who are relieved by medical or surgical treatment but require training in some kind of a special class or institution before they can take their normal places in school and society. Still a third class is made up of those who are incurably retarded and would become candidates for permanent incarceration if there were enough institutions to hold them.

The Immediately Curable Cases.—The first class, those who are cured by medical or surgical relief, are the ones for whom the clinic performs probably the greatest service with the least expenditure of time and energy. Usually they are children so near normal that their guardians or parents would not think of taking them to a physi-

cian or medical clinic. Such children are not considered to be ill. Their physical defects, though highly important as sources of nervous irritation and inability to give attention, are, from a pathological point of view, not considered very serious. These defects are supposed to be "natural" to childhood.

It is the teacher at school who more than anyone else notes the cumulative effects of many slight ills or the retardant result of a grave one, though she herself may not recognize what they are. Finally she urges the parents to take the child to the Psychological Clinic for examination. There the cause is found, and through the aid of the social worker the child reaches the proper medical or surgical clinics, and speedy relief follows, to the great satisfaction of both parents and the teacher. From the many cases of this kind upon our records, several typical ones are here chosen in order to illustrate what was done.

Case 55 is a boy nine years of age who was brought to the clinic in October, 1909, by his mother on account of backwardness in school work. He was only in the second grade, though he had been going to school three years.

Nothing appeared in the boy's personal history to account for the retardation. He had had the measles and also the whooping-cough. He had been slow in walking, but talked at the normal time. His birth was natural. A short time before coming to the clinic he had been operated upon at the University Hospital for adenoids, and had improved a little after their removal.

The teacher reported that he needed individual attention, but there was no time in school to give it to him, and added the usual pedagogical formula that he was not interested in school work and that most of his errors were due

to carelessness. Possibly there was some connection between the boy's lack of interest and the fact that he arose at five in the morning to serve papers.

The boy presented a well-nourished appearance and a muscular development rather good for nine years, though he was short for his age. Adenoid signs appeared in a nose broad and flattened at the base, with small nostrils, and in a high and narrow palate.

He could read in the second reader, but did not seem to be able to remember what he had read. He could not subtract 18 from 25, nor could he divide 50 by 25, nor subtract 25 from 50. His special ability was spelling and in this study he usually made a grade of 80 per cent. or 90 per cent.

His eyes were examined and glasses fitted for overcoming the defect discovered. Since that event, every report from his mother stated that he was doing very well, excepting that he had lost two pairs of glasses and had broken a third pair.

On October 10, 1910, his eyes were again refracted, and when asked by the doctor why he did not study and make up his mind to learn carpentry, he replied that there was no use doing anything because the world was coming to an end before he grew up, so it would only be a waste of time to learn anything.

In February, 1911, his mother reported that he was doing very nicely in the public school in all his studies, and that he had brought his grades in history up to 94 per cent. and in geography up to 85 per cent.

This boy is illustrative of many who are backward because of some physical defect which is discoverable through a careful examination, and which when removed permits the child to respond rapidly to the ordinary modes of teaching.

Case 306 is a girl four and one-half years old who was brought by her mother from a distant city on account of backwardness. Her birth was instrumental but not difficult. Though she nursed naturally the milk did not agree with her and she became very much emaciated. On account of a threatened attack of *cholera infantum*, artificial feeding was substituted, and she was taken to the country when seven weeks old, weighing at that time only seven pounds. From the age of seven weeks she began to grow and thrive. Later she contracted whooping-cough, but from that time on was never seriously ill. Her first tooth came at six months and she began to walk when about two years old.

Eight months before her birth her father died suddenly of heart disease at the age of thirty-nine. The mother naturally suffered intensely from the shock of her husband's death and from the additional worry over the fact that her own mother was going blind.

Restored by
Speech
Training

At times the child's eyes would become badly crossed and refused to converge properly, though they seemed to converge well enough at other times. Defective vision was indicated by her general demeanor, and by the fact that she very seldom looked at any object or person. She could not talk, but could make a few grunting noises. Her tonsils were very much enlarged.

It was recommended that she be taken to a hospital for examination of the nose, throat, and eyes. This was done—her eyes were examined and treated and she was fitted with the proper glasses. Later she underwent an operation for the removal of adenoids and enlarged tonsils, and three days later she had so improved that she was sent back home. Two months after the operation the mother reported a wonderful improvement, stating that

the child was happy again and very much interested in things she never noticed before, like rain, snow, clouds, pictures, etc. She seemed to understand everything that was said to her, and her efforts at speaking were noticeable in her more frequent attempts to make sounds. Owing to the distance of her home from Philadelphia, it was not possible for the clinic to give her speech training, which no doubt would have greatly aided her in the acquisition of language.

E. C., Case 148, is a girl nine years of age, brought to the clinic in February, 1910, because of slowness in learning at school. She had started at school when seven years of age after being taught at home. Had been entered in the second grade, and at the age of nine was in the third grade. Her backwardness was not exceedingly marked, but had been increasing, and consequently it gave her parents some uneasiness.

No abnormalities appeared in the family history as far as it was procured. During her own lifetime the girl suffered from a number of acute diseases, among them a very bad case of eczema of the entire body, from head to foot. She had had congestion of the brain when she was only five years old, and again when she was eight. In the preceding July, before coming to the clinic, she had an extremely sore throat, which was reported to be diphtheritic. She also complained of suffering a great deal from headache. No marked stigmata were apparent. Her nose and open mouth indicated adenoids and probably enlarged tonsils.

She was recommended to a nose and throat clinic and to an eye clinic, where hypertrophied adenoids and tonsils were diagnosed and the eye examination revealed a marked defect in vision. She was operated upon and glasses

were fitted. February, 1911, about one year afterward, a letter was received at the clinic from the child's mother reporting a decided change for the better in her ability to learn at school and in music. At the present time her eyes have improved so much from the medical treatment that she has been able to lay aside the spectacles. She makes good progress in her school work and is able to succeed easily with lessons which formerly she could not learn. In music she has been able to surpass her own mother in ability, and at the date of the report was engaged to give public performances. She is reported as being different in every way.

This case illustrates the class of children who recover immediately upon the removal of physical defects which had caused the temporary retardation.

The Rapidly Curable Cases.—Many cases, however, are not so readily restored to normality as the ones just noted. Many of them require special training and for two reasons. First, as has been intimated in preceding chapters, some cases cannot be immediately classified and require special pedagogical observation before it can finally be decided whether their mental retardation is curable or not. Secondly, some cases which are classified as temporarily retarded, after the removal of their physical defects, require intensive pedagogical methods in order to recover the lost ground and again reach their normal place in school and society.

The Hospital School.—The needs of the former class, those requiring temporary observation in order to make a proper classification, have made necessary an institution so closely related to the Psychological Clinic that it can truly be said to be a part of it. This may be variously styled a school of observation, an observing ward or a

hospital school. It should partake of the functions of a home, a school and a hospital. To it should be sent those children who, by reason of their wavering mental powers, seem to linger on the borderland between true amentia and normality. Usually they suffer from a number of physical defects of such a nature that the defects may cause their retardation. The diagnosis is therefore extremely difficult and requires a long time to be made with certainty. These children should be freed from physical defects by surgical and medical treatment; they should then be taught and closely observed in a model school and cared for in an ideal home. After a time of such treatment their cases can be diagnosed with certainty and they can be sent to their proper places in society or in institutions for their permanent welfare.

The relation of the clinic to a hospital school, as well as the reasons for the establishment of the latter, are thus made clear. One supplements and aids the other. While the chief functions of the clinic are classifications and the dissemination of advice as to the suitable pedagogical methods for training special children, in many cases neither the classification itself nor the subsequent training can be carried on to satisfactory completion without a place where the child can be observed and cared for under the closest daily scrutiny. Those conditions demand a hospital school just as a medical dispensary demands a hospital ward.

It might be thought by those unacquainted with the true circumstances that hospitals and schools enough are already provided by the appropriations of legislature or the munificence of private purses. It should be remembered first that a hospital school, such as is here contemplated, is not a permanent home or school. Theoretically, it is merely a temporary abiding

place for the child until the classification is completed. That, at least, is what it would be under ideal directions. But under the conditions now prevailing practically everywhere in the country, such a temporary shelter is made necessary by the woefully inadequate provision, either by public or private charity, for the feeble-minded. As already indicated, the lowest conservative estimate places their number in America at 150,000; the highest at about double that number. Of these only 18,000 are provided for in public and private institutions and 17,000 more are in public schools, where they are received perforce or by the grace of the school officials until the dawning of a public conscience, in a more enlightened day, will demand their proper care and training in suitable colonies. The other hundred or hundred and fifty thousand are not systematically cared for, but must depend upon the happy accident of birth or fortunate circumstances of chance to secure any attention appropriate to their needy condition. All too certain it is that many of them, by force of circumstances or the will of others, suffer worse neglect or harsher treatment than that accorded to their normal brothers of the same social position. To all of these neglected children it is possible for hospital schools to minister, or, at least, to open a door of hope.

Some Rapidly Curable Cases.—Those children who are not immediately restored by the removal of physical defects, but require certain kinds of pedagogical training before their complete restoration, bring the clinic in touch with its widest range of associations. The training is given in many places and in a variety of classes and schools. Out of a large number several cases have been selected in order to illustrate the care of these particular children.

Case 319 was a boy three years of age, who was referred

to the clinic by the Children's Bureau on October 29, 1910, because of his inability to speak. He had been very backward from birth and very troublesome in the house, where he occasioned his nervous mother great annoyance. She was in the habit of leaving him and his brother alone while she went out to work.

Upon examination he seemed to be a bright and intelligent child. He could understand language, would say a few words, "papa," "mama," "dada," and
Speech
Case seemed to make an effort to say "horse." He learned quickly how to blow, but refused to place the lips in position for the "p" sound. The word "mama" was very high and unnatural, but "dada" was pronounced in a much more natural tone. In trying to say "boy," he said "bo." He was recommended to attend the speech class of the clinic conducted on Friday afternoons, and was placed in one of the boarding homes connected with the clinic.

He was again examined on November 11, 1910. He gave the "t" and "o" sounds upon command. He made two attempts to combine "t" and "o," but did not succeed. On November 14 a report was received from the caretaker with whom the child was staying that he is constantly chattering and making every effort to talk.

Still a third class remains to be dealt with. It includes all those children who are mentally defective and require life-long care in some institution for their best training and treatment. Theoretically, all the children so diagnosed at the clinic should be sent to institutions and usually applications are made for entrance to such schools. However, under the conditions usually existing it is frequently impossible to secure entrance for those unable to pay for their care and training. Therefore, it happens

that some of these children are sent back to their own homes and their parents given instructions for their best possible training under the circumstances. Often, as is the case given below, such a course is satisfactory. In the majority of cases, however, attempts are made to secure entrance in some proper institution for life-long segregation of these children from the mass of society. At still other times it is possible to make arrangements with some other organization where the proper training may be given the feeble-minded child, and at the same time he may live at home.

Case 46 was a girl thirteen years of age who was brought to the clinic in August, 1909, on account of general retardation, by her father, the principal of a boarding school for young ladies. He stated that she could do nothing with figures, could not even tell which was the greater of any two numbers. She went to the public schools for a short time before the family moved, but most of her life she had been under the care of teachers of the boarding school.

When about twelve years of age she had pneumonia. She had had none of the ordinary children's diseases except whooping-cough. She was a blue baby born with instruments, and her head was very misshapen. She walked when about fifteen months and talked a little earlier than that. Her brother, who is eleven years old, is as conspicuous for his brightness and reasoning powers as she is for her dulness.

A Case for
Home
Training

At the time of the examination she was a well-nourished and healthy girl, rather stout and tall for her age. She had a good appetite and slept well, going to bed at 9.30 in the evening, and not rising until 8.00 o'clock in the morning. She stated that her eyes hurt her when she read too much.

She had normal hearing, the right ear apparently being a little better than the left. Her skull was brachycephalic with no especial protuberances.

The mental examination showed her to be fair at spelling and reading in the sixth-grade book, and she had an intelligent idea of what she read. She spelled "horse," "azure," "marriage" correctly, but gave up trying to spell "original," "magnificent." She said that she could not spell "Waterloo" or "German." She did not know all of the multiplication tables. She said, for example, three times three equals nine; four times four equals eight; three plus two equals five, and twenty-three plus nine she could not answer. She matched four colors accurately from memory, but it was easy to make her uncertain whether she was right or not. She failed in matching five colors at one time. She was not good at relating incidents, though she caught impressions and remembered isolated things very well, but did not grasp relations, either in reading matter or in telling about something which had happened. She remembered unusual things which people are not apt to notice. She was very fond of music and seemed to have talent, played the piano by note or by ear; but progress in music had not been very good because she would not apply herself.

She was very affectionate, and liked to play with smaller children, from six to ten years old; she was also particularly fond of babies. She would go with girls of thirteen years for anything like sight-seeing, but would not join them in games that required any real application. She had an aversion to work of any sort, and had not been trained to make beds and help around the house. If left to herself she would spend the day romping with children half her age or petting the cows. She was very fond of

commendation, and for this reason would rather help other people than her mother. She could dress herself, but she could not comb her own hair. She had a bad temper, and when crossed became very sulky.

Her father was informed that this daughter was feeble-minded and would never make progress at an ordinary school, nor be able to take full charge of her own affairs in life. He was advised concerning the kind of education she might acquire and the methods to be pursued in her training. His intelligence and pedagogical skill made it possible for him to give her instruction at home, where she is at present.

Case 29 was a boy eight years of age brought to the clinic by his mother on July 20, 1909, on account of backwardness in school occasioned both by defective speech and bad conduct. At six years of age he entered a parochial school and was still in the first grade at eight years. The teacher in whose class he was considered him a "dumb child."

Added to the usual children's diseases, including measles, mumps, and whooping-cough, he also had an attack of convulsions at about one year of age, lasting from a quarter to eight o'clock Sunday night until a quarter to eleven Monday morning, which left him unconscious until Wednesday. The attack appeared to come from a temporary cause,—eating too much cake with currants in it,—as the spasms did not return and, so far as the mother knows, they left no permanent bad effect. He began walking at eighteen months and talked about the same time. His tonsils had been removed about three years before coming to the clinic. On making the examination of the child at the hospital, the physicians said that he was tongue-tied, and that they would operate for

A Case
Helped by a
Special Class

it while he was under ether, but the mother could see no difference in his ability to talk after the operation. No causes for the speech defect appeared either in his vocal organs or in the circumstances of his birth, which was natural but prolonged almost to the point of asphyxiation. As far as it could be ascertained, the family history on both sides of the house was normal.

The physical examination showed that he was subject to attacks of indigestion accompanied with headache, and that he breathed with his mouth open. An examination of the throat showed large quantities of mucus dropping down from the posterior nares. A careful diet was recommended and a spray was prescribed by a physician for the nasal condition.

The mental examination proved him to be completely muddled on the subject of the alphabet, although he had been specially drilled on it by his mother even before he commenced school. He could count to twelve, but could do nothing with simple arithmetical problems. His spelling was equally poor. The mother reported that she had notes from his teacher, stating that each day he became less able to do his lessons and was so troublesome that he disturbed the order of the whole room. The principal of the school reported that he was absolutely impossible as a pupil and that no one could teach him anything. This report was in harmony with the mental diagnosis which indicated that the boy was a middle-grade imbecile.

It was recommended that he be placed in a school for the feeble-minded, but his father objected to sending him there, and insisted that a great deal of the child's backwardness came from shyness. At home it was surprising to see how well he was able to spell, and pronounce words when his father taught him. In his opinion the boy was

so shy that it would take months for him to make friends with new teachers.

Finally he was removed from the school he was attending and entered in a special class near the home of his aunt with whom he went to live, and who gave him her special attention. With her training, and that received at the special class, the boy made fair progress for one in his mental condition, and when last heard from in January, 1910, he was described by his mother in terms of ample praise and reported by his teacher "as getting along all right." This should not be taken to mean that the boy is normal mentally, nor that he learns like other children, but only to illustrate what is here intended, namely, that many children can be helped by special training different from the regular school teaching.

Case 238, a girl of sixteen, was brought to the clinic by her mother and a probation officer because of moral delinquency. She first began school when six years of age and though not beyond the third grade left when she was fourteen. Her school career was further shortened by persistent truancy. After leaving school her irregular conduct manifested itself in her inability to hold a position for any length of time.

In her family there had been eleven children, only three of whom are living. The youngest living child, then eleven years old, was in the second grade because he did not begin school until he was eight on account of general poor health and some skin trouble. One child had succumbed to tuberculosis; and the others died in infancy, two of them very suddenly when only one day old from unknown causes, and another a little older from convulsions. In addition there had been one miscarriage and one still-birth. The mother was living

A Moral
Imbecile

and had kidney trouble, and reported to have been at one time "stone blind." The father died from consumption.

The bad family history was perpetuated in the girl's physical condition. She suffered from a variety of defects and stigmata. Her vision was defective; the notchings of her teeth indicated some specific inherited disease or early rachitis. Adenoid growths were present in the post-natal passages. Her nutrition was poor and her general appearance denoted mental enfeeblement.

The mother stated that since the time of the girl's second dentition she had suffered from ungovernable rage, was always disobedient, and used vile language continually. She had always been very untruthful and denied her misdeeds point blank even when caught in the act of committing them. She was lazy and very loath to rise in the mornings, but quite as unwilling to go to bed at a seasonable hour. She was so uncleanly in her personal habits that she was discharged from her last position for this reason.

Her case was diagnosed as mental and moral imbecility, and the probation officer, who had charge of her, was advised of her moral irresponsibility. The girl was accordingly committed to the observation ward of a hospital in June, 1910. Later she became entirely insane and is at present in an asylum where her congenital immoral tendencies can do no harm to others.

Case 20 was a boy fifteen years of age who was brought to the clinic in July, 1909, by his father because of backwardness in school. He had been attending school for nine years, excepting one year when he had a very bad case of diphtheria, and had covered only three grades.

Besides having diphtheria, he had mumps, whooping-cough, measles and chicken-pox. When about ten years

old he fell off a twenty-foot stone wall and alighted on the top of his head. It stunned him for a while, but left no scar or other bad effects. When five or six years old he fell from a fence and struck his head, but this mishap likewise appeared to leave no permanent injury. When about twelve or thirteen years old, while riding a bicycle, he ran into a wagon and two ribs were displaced. A Dangerous Case

Besides this series of accidents, he suffered from rickets and for a time he was very bow-legged. He was passionately fond of eating lime, and even before he was able to walk he would pull plaster off the wall in the room or pick mortar out between bricks in the yard and eat it. His first steps were delayed until he was about three and one-half years old, and he was equally retarded in learning to talk. His enunciation was still poor at the age of fifteen, partially due to bad occlusion of his front teeth, one of which had been broken in one of his falls. His articulation was obviously further hampered by adenoid growths, the presence of which was later confirmed at a medical examination.

The mental examination showed that he could spell and read fairly in a second-grade book, but that he was very poor in arithmetic. He did not know his multiplication table, though the father had supplemented the public school teacher's efforts by drilling him at night for two years. He said, for example, eight times seven equals sixty-three. His fondness for athletics impelled him to read the baseball news in the daily paper, but nothing more. He spelled elephant, e-l-e-p-h-e-n-t, and picture, p-i-c-h-e-r, but could spell correctly *catcher*, *base* and *fielder*. He played baseball and other games, and spent much of his indoor time making boxes and toys with his father's

tools. He was not clean or neat in his personal habits; bolted his food, and neglected bathing and cleaning his teeth.

To his mental retardation was added a violent temper which often exhibited itself in ungovernable outbreaks, especially at home, during which he had several times offered violence to members of the family. For this cause, emasculation had been considered by a superintendent of an institution for feeble-minded.

The mental diagnosis confirmed the opinion of a specialist given some years before, pronouncing the boy a high-grade imbecile. At the specialist's advice, the father had made some effort to enter the boy in the training school for the feeble-minded at Elwyn, Pa.

At our recommendation, the boy was taken to a nose and throat clinic, and about ten days later he underwent an operation for the removal of his adenoids. After the operation he showed a marked improvement in temper. The father was then advised to enter him at a Y. M. C. A. gymnasium for a three months' trial of physical training under the supervision of the clinic.

Here he was placed under the tuition of the physical director, who was also a medical man, and one of the physical examiners at the clinic, to whose skill much of the favorable results of this case were due.

About four months of training there made a marked change in his physical tone and mental attitude. He improved so much socially that he became a member of a new boys' club, and exhibited a surprising initiative by enlisting three other boys in the membership of the same organization. A little later he aspired to the leadership of a group of boys, and when told that he needed more experience, made a request for a book in which he could

study those things which it would be necessary for him to know. He was given the book and he took it home and studied it diligently. His three months' progress was so satisfactory that his training continued indefinitely along the same lines. His gymnasium work had so toned up his physical condition, and at the same time so stimulated his social ambitions, that he applied himself more diligently and with more interest to all his tasks. His fits of evil temper at home grew far more infrequent, and his habits of study improved so much that in February, 1910, he was promoted to the next grade.

Case 179 was a boy seventeen years of age who was brought to the clinic, March, 1910, by his aunt because of backwardness in school. He had entered the public school when about six years of age and had studied regularly, but at the age of seventeen he was only in the lower fifth grade, and was having the most difficulty with arithmetic and language.

It was reported that at about one and one-half years of age he suffered from a disease bordering on marasmus. Otherwise he has never had any serious illness.

At nine, on account of his defective articulation an examination of his vocal organs had been made and again at the age of fourteen his nose and throat had been examined; but no malformations were found. No items of significance appeared either in his personal or family history.

A Case
Sent to the
Country

The physical examination at the clinic showed that he had a fairly well-shaped head with no marked protuberances excepting on the forehead over each eye. His eye indicated some foetal arrest; his mouth was very sensitive, his teeth were covered with tartar, irregular and full of caries, with upper incisors entirely decayed, and gums

receding before the tartar. His upper jaw and lip extended out over the lower. The aunt stated that the boy would eat very little, his diet consisting chiefly of ice cream, jelly, bread, butter, and beans, all of which he bolted without chewing. Naturally he suffered from bilious attacks and headaches.

The mental examination showed that he could not spell correctly such words as "middle," "interested," "literature," and "original." He read in the fifth reader, but hesitated much and made several mistakes. He was poor in arithmetic and volunteered the information that the previous month he had received a grade of 40 in that study. His bad school record was offset by his fondness for manual working, willingness to run errands and to deliver groceries, though he did not seem to have any aim or ambitions for the future. He first said that he would like to be an engineer, then changed it to machinist, then a carpenter, and ended by saying "anything would do."

It was recommended that he be entered in the New Jersey Training School at Vineland, N. J., where he was soon placed. At the last report he was looking much better, with a good healthy color and bright eyes, and happy in learning the manual occupations for which he was fitted. While his mentality will never be raised to normal, his mental and manual acquirements can be increased, and, best of all, the irregular, unwholesome régime and vicious dietary of an over-indulgent home have been replaced by sane, simple feeding, fresh air, and exercise.

Besides the sociological relations illustrated by selected cases in the preceding pages, there are many others. Among those deserving mention is the friendly coöperation

A group of atypical adolescent boys. Each of them was unusual in some respect.



exhibited by medical men in their willingness to give time to the clinic itself as medical examiners, to receive and examine cases at their offices and to refer their patients to the clinic for mental diagnosis. In the last respect, hospitals, reformatories, orphan asy-
Cases Treat-
ed by Mail
lums, and homes for children are following the example of the physicians. Boys' clubs and day nurseries are also turning to the clinic for aid and advice regarding their difficult charges, and with its help they succeed very often in relieving children from obstructive physical defects or deteriorating environments. Finally, the good offices of the Psychological Clinic have become so widely known that it is found, in a few instances, necessary to extend its influence to places and to people too remote and too poor to bring their children to Philadelphia. Efforts have been made by the clinic to give advice by mail concerning pedagogical training. This is done by first securing full information from parents in answer to a questionnaire concerning the condition of the child. They are then advised to take the child for a physical examination to some local physician, specialist, or medical clinic, and to make sure that the child is in the best physical condition possible. When this has been done and immediate relief has not followed, the Psychological Clinic has given advice by mail as to pedagogical training and in some cases the results have been gratifying.

In all its social work the clinic is guided by the principle of its function as a clearing house for all special children. It receives all children who come. As far as possible it endeavors to aid all (except those under its immediate care in the Hospital School) through social institutions already existing. It aims to be a helpful coördinating and correlating agency among all societies and organiza-

tions, aiming at the welfare of children. As its work becomes better known, its possibilities for good continually broaden and the value of its beneficences for the young becomes increasingly appreciated by all who labor to make each successive generation healthier and happier than the last.

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